

Radio Amateurs of Canada applauds 60 metre band frequency allocations!
Radio Amateurs du Canada se réjouit de l'allocation de fréquences sur la bande du 60 mètres!



MARCH / APRIL 2014 – MARS / AVRIL 2014

Dave Snydal, VE4XN (left) and Bill Karle, VE4KZ, discuss one of the documents at the Manitoba Amateur Radio Museum.



George Hrischenko, VE3DGX, on his "One and Only DXpedition".



VE7RC Copper Island Activation



John (Jack) S. Belrose, VE2CV/VE3CVV,
on the EH Antenna Systems



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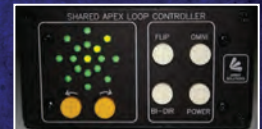
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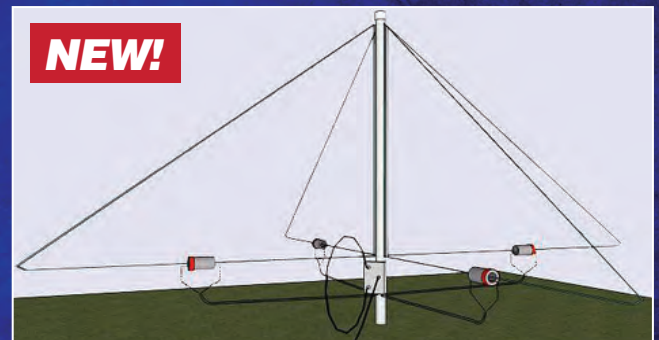


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MARCH & APRIL 2014
MARS & AVRIL

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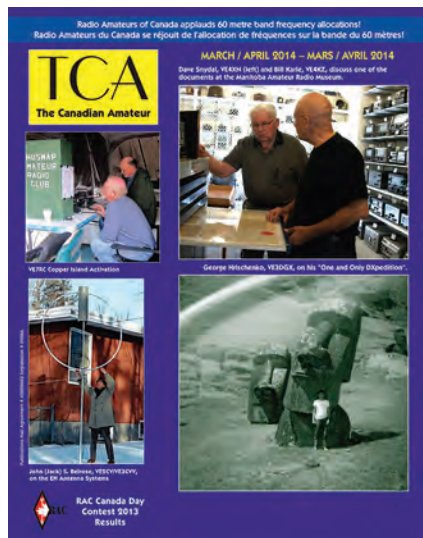
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"MARM is a living museum in that the collection continues to grow with additions of vintage and modern equipment while including a functioning Amateur Radio station, a repeater and beacons." (see page 40)

"As the Cape Scott set off through the canal ... I experienced an episode that I will remember to my dying day." (see page 24)

Roger Sturtevant, VE1SKY, writes:

"This is just a note to you to let you know that the cover photograph of VE1JF in the September-October 2009 TCA that Andy Neimers, VA1FJT, referenced as mine in the article 'Changing of the Guard at VE1JF' (January-February 2014 TCA, page 27) should have been credited to Jim Fisher, VE1JF. The beautiful sunset photograph of Jim's antennas high over the Bay of Fundy was taken from the bucket of a crane that could be extended to over 100 feet to work on Jim's antennas. Although the other photographs of station VE1JF in the initial TCA antenna issue were taken by me, Jim snapped that cover shot."

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WHAT'S NEW ON THE "COMMUNICATIONS" FRONT AT RAC?

Last October, Vincent Charron, VA3GX/VE2HHH, became RAC's new Director of Communications and Fundraising. Vince works at the RAC Headquarters in Ottawa along with the RAC Office Manager, Frank Greene.

The RAC website, our main platform, is currently undergoing a revamp. This process will take some time, however in the end we should have a better, newer, friendlier platform to benefit all members, Amateur Radio operators as well as the general public. RAC is more and more capitalizing on both of its social platforms, Twitter and Facebook, to provide timely information relevant to Amateur Radio in general as well as RAC/ARES activities. Find us at @RACTWEETS or search for "Radio Amateurs of Canada" on Facebook. Please log in often to these sites to read frequent updates from the RAC head office.

Do you have any Amateur Radio news tidbits, pictures (ham shack, mobile/base antenna...), personal write-ups or bios, DX success stories and so on that you would like to share with RAC? Please send it to us by email or regular mail to the address provided below and we'll help find the best place to give you that opportunity to share it.

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720 Belfast Road, #217, Ottawa ON K1G 0Z5; Telephone: 1-877-273-8304; Email: hq.communications@rac.ca

OPERATING

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Articles, reviews, letters, features, suggestions, photographs and essays are welcomed. Manuscripts should be legible and include the contributor's name, call sign, phone number(s) and addresses (mail, email and packet, as applicable).

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Silent Keys – In Memoriam

*With regret, we record the passing of these Amateur Radio operators.
Nous avons le regret de vous annoncer le décès des radioamateurs suivants.*

- VA2YQ – Paul MacDougall, of Montreal, QC, at age 85, on December 9, 2013.
VA3TIP – Tip Corey, of Sarnia, ON, at age 84, on December 1, 2013.
VA4DAV – David Preston, of Flin Flon, MB, at age 59, on January 7, 2014.
VE2YV – Otto Dopheide, of Hudson, QC, on October 24, 2013.
VE3DXG – Ted Simola, of Hamilton, ON, at age 81, on November 7, 2013.
VE3EKA – Bill Westbrook, of Ottawa, ON, at age 90, on January 12, 2014.
VE3FMT – Jim Traves, of Toronto, ON, at age 85, on November 29, 2013.
VE3GJA – Bruce Osbourne, of Kingston, ON, on March 14, 2013.
VE3IPJ – John Harkness, of Whitby, ON, at age 71, on February 12, 2013.
VE3JDS – Marilyn Duncan, of Ottawa, ON, on January 7, 2014.
VE3LSO – Ray Gagne, of London, ON, on December 22, 2013.
VE4ACP – Ross Neale, of Brandon, MB, at age 88, on April 21, 2013.
VE4FGR – Fred Robertson, of Winnipeg, MB, at age 98, on December 16, 2013.
VE4HST – Harry Trapper, of Winnipeg, MB, at age 73, on January 8, 2014.
VE4LB – Charlie Bailey, of Brandon, MB, on January 16, 2014.
VE4MGR – Ron Martin, of Winnipeg, MB, at age 68, on June 30, 2013.
VE4RB – Alexander Perrin, of Brandon, MB, at age 94, on November 11, 2013.
VE4SG – Stan Gilewich, of Winnipeg, MB, on December 20, 2013.
VE4SRM – Stan Miner, of Winnipeg, MB, at age 92, on January 6, 2014.
VE4YV – Gerry Makenbach (VA3AAG), of Barrow Bay, ON, at age 75, on June 21, 2013.
VE5EA – Gordon Green (VE5ATJ), of Moose Jaw, SK, at age 89, in January 2014.
VE5JN – Lloyd Jones, of Weyburn, SK, at age 90, on August 16, 2013.
VE5JU – Grant Davidson, of Lanigan, SK, at age 88, on December 8, 2013.
VE6GB – Art Fritz, of Didsbury, AB, at age 88, on January 9, 2014.
VE7HOL – David Holman, of Kelowna, BC, at age 70, on January 8, 2014.
VE7JIU – Dudley Leather (VE7GPZ/VE7YQZ), of Quesnel, BC, on December 19, 2013.
VE7PR – Rod Reid, of Kamloops, BC, at age 61, on November 19, 2013.
VE7TBG – Gunter Ferdinand, of Creston, BC at age 79, on November 20, 2013.
VE7VAX – Stewart Harrowing, of Madeira Park, BC, at age 88, on November 20, 2013.
VE9WN – Weldon Fuller, of Moncton, NB, on December 17, 2013.
VO1TK – David Colton, of St John's, NL, at age 76, on August 22, 2013.
VY2UA – James MacEachern, of Charlottetown, PE, at age 85, on January 11, 2014.

*Note: In the above list an * indicates a previous call sign or that a call sign has been reissued.
The list of Silent Keys is prepared by volunteers at RAC Headquarters at <rachq@rac.ca>.*

RAC NATIONAL INCOMING QSL BUREAU

Following changes made to the RAC QSL Bureau system, RAC members are reminded that all VE/VA cards to VE/VA Amateurs are to be sent to the RAC Incoming Bureau in Saint John, New Brunswick and not to the Outgoing QSL Bureau.

This QSL service is only available to RAC members.

RAC National Incoming QSL Bureau:
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NOTICE TO RAC AFFILIATED CLUBS.

As of March 1, 2014, the RAC Affiliated Club Program and RAC Liability Insurance Program will be administered by RAC headquarters staff.

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A MESSAGE FROM THE PRESIDENT / UN MESSAGE DU PRÉSIDENT



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I am pleased to say that Canadian Amateurs have finally received access to channelized use in the 60 metre band. It has been a long time coming.

Our HF/MF Band Planning Committee originally drafted and sent a proposal to the RAC Executive, which was supported by the Board and became RAC policy in the first quarter of 2010.

A dialogue with Industry Canada followed, complete with the usual advocacy tools: letters to officials, Canadian Amateur Radio Advisory Board (CARAB) meetings, sidebar discussions at Radio Advisory Board of Canada (RABC) and a series of discussions the breadth of Industry Canada. I am pleased that after much hard work by RAC we have new frequencies to use. This is RAC at work. An article about the 60 metre decision can be found on page 8.

I want to thank the HF/MF Committee who initiated the process of obtaining 60 metres and wish to name the RAC volunteers who worked hard on behalf of Canadian Amateurs: John Connor, VE3TG, Jim Dean, VE3IQ, Richard Ferch, VE3KI, Jim Fisher, VE1JF, Glenn MacDonell, VE3XRA, Ian MacFarquhar, VE9IM, Mel Martin, VE2DC, Don Moman, VE6JY, Bob Nash, VE3KZ, Norm Rashleigh, VE3LC, Bryan Rawlings, VE3QN and Frank VanderZande, VE7AV. I won't go into detail of who did what and when and I am sure that I missed some key RAC volunteers who helped on this file but I thank you for your hard work on behalf of all Amateurs in Canada.

We have work to do internationally on 60 metres. We are working with Industry Canada with regards to World Radio Conference 2015 (WRC-15) to achieve an international 60 metre allocation. We provided leadership at WRC-12 and will continue to provide leadership at WRC-15. RAC will continue to "punch above its weight" internationally.

A priority for RAC for a number of years has been the update of RBR-4 "Standards for the Operation of Radio Stations in the Amateur Radio Service" – the core Industry Canada regulatory document that frames what Amateurs can and cannot do that had not been updated since 2007.

The decision on 60 metres prompted issuing an updated RBR-4 and provided an opportunity to include several allocations and changes that had been approved but not reflected in RBR-4. These include the allocation at 137 kHz approved in 2010, changes to the 220 MHz band that have been in effect for several years and an updating of all the Amateur allocations above 50 GHz that were changed at WRC-03 and came into effect in the Canadian Table of Frequency Allocations in 2005. There is still work to do. Industry Canada has not yet announced a decision on 472-479 kHz – the international allocation for Radio Amateurs that was achieved at WRC-12 and incorporated in a proposed new Canadian Table of Frequency Allocations posted for public consultation in June 2013.

Je suis heureux de dire que les amateurs canadiens sont finalement autorisés à utiliser des fréquences sur la bande du 60 mètres. Il a fallu y mettre du temps.

Notre comité de planification des bandes HF et MF a, au début, a tracé un plan et fait une proposition au Conseil exécutif de RAC. La proposition fut adoptée par le Conseil d'administration et devint une politique officielle de RAC dès le premier trimestre de 2010.

Un dialogue avec Industrie Canada s'en suivit. Puis ce fut les tractations légales usuelles : lettres aux représentants officiels, rencontres avec le Conseil consultatif radioamateur canadien (CARAB), discussions informelles autour d'une table d'invités avec le Conseil consultatif du Canada sur la radio (RABC) et une série de discussions avec Industrie Canada. Je suis heureux qu'après tant de travail de la part de RAC, nous disposions maintenant de nouvelles fréquences à notre service. Voilà l'œuvre de RAC ! Un article au sujet de la décision relatif au 60 mètres est accessible à la page 9.

Je veux remercier le comité HF/MF qui a initié le processus de demande du 60 mètres ainsi que les bénévoles de RAC qui ont travaillé fermement au nom des amateurs canadiens : John Connor, VE3TG, Jim Dean, VE3IQ, Richard Ferch, VE3KI, Jim Fisher, VE1JF, Glenn MacDonell, VE3XRA, Ian MacFarquhar, VE9IM, Mel Martin, VE2DC, Don Moman, VE6JY, Bob Nash, VE3KZ, Norm Rashleigh, VE3LC, Bryan Rawlings, VE3QN et Frank VanderZande, VE7AV. Je ne veux pas aller dans tous les détails afin de savoir qui a fait quoi et quand. Je suis sûr que j'oublierais certains bénévoles importants qui ont participé au processus. Je vous remercie donc tous au nom des amateurs du Canada.

Nous avons travaillé sur le 60 mètres à l'échelle internationale. Nous continuons de le faire avec Industrie Canada en respectant les opinions de la Conférence World Radio 2015 (WRC-15) pour obtenir internationalement l'allocation du 60 mètres. Nous avons assumé le leadership à la WRC-12 et nous ferons de même à la WRC-15. RAC continuera de se surpasser sur le plan international.

Une des priorités de RAC depuis plusieurs années est de garder à niveau les « standards opérationnels RBR-4 » des stations radioamateurs. Ce document central réglementaire d'Industrie Canada, qui balise l'action des amateurs, n'a pas été revu depuis 2007.

La décision sur le 60 mètres a activé l'enjeu de la mise à jour du document RBR-4 et fourni l'occasion d'inclure plusieurs attributions et changement approuvés mais encore absents de RBR-4. Cela comprend l'allocation du 137 kHz approuvé en 2010, les changements à la bande du 220 MHz en application depuis plusieurs années et une mise à jour de toutes les attributions radioamateurs au dessus du 50 GHz ; elles avaient été modifiées par le WRC-03 et mises en vigueur en 2005 par la Table canadienne des allocations de fréquences. Il reste encore du travail à faire. Industrie Canada n'a pas encore annoncé sa décision à propos du 472-479 kHz – allocation internationale pour les radioamateurs finalisée à la WRC-12; et intégrée dans une nouvelle allocation des fréquences par la Table canadienne rendue publique en juin 2013.

Malheureusement, il y a plusieurs autres changements que RAC demande depuis plusieurs années mais toujours sans réponse, dont la révision du code morse (très probablement la suppression de l'obligation pour les amateurs étrangers dont le pays n'exige plus le code morse pour l'obtention du certificat). Nous continuerons d'exercer de la pression sur le gouvernement relativement à ces points.

Unfortunately, there are several other changes RAC has been asking for several years which did not make it into this revision (most notably removal of the Morse Code requirement for Amateurs visiting from countries that no longer require Morse Code for their Amateur Radio authorizations), and we will continue to press the government on these points.

On different matters: I want to thank Doug Mercer, VO1DM, for his hard work as our Chief Field Service Officer. He has served with distinction in that post for the last four years. His was a tough file and he gained the respect of all who worked with him. After four years he wanted to have a personal life and has stood down as CFSO. I will, very temporarily, stand in until we can recruit a new CFSO. This is a key job. The scope of this task is very broad – much broader than emergency communications. The task is to build a true regional structure.

I want to remind everyone that RAC will have its Annual General Meeting in British Columbia associated with the Pacific Northwest DX Conference from July 25 to 27 of this year. For more information check out <http://orcadxccc.org/vancouver2014/home.html>. Please come to the conference and to the AGM; but for those that cannot make it to beautiful British Columbia we will again have an electronic outreach. We started this outreach in 2011 in St. John's and want to see it grow in use. We recognize that not everyone can make every AGM in person but want to ensure that members have an opportunity to participate. Not all national societies have AGMs and you should take advantage of this opportunity to question and challenge the RAC Board and Executive.

In an effort to improve our information broadcast capabilities and public visibility, RAC has begun increasing the use of its two social platforms, Twitter and Facebook. Please join Twitter @RACTWEETS and check out Facebook for "RAC" or "Radio Amateurs of Canada".

We have also produced a new brochure to promote RAC and have other pamphlets under development. Visit <https://www.rac.ca/en/amateur-radio/>.

As a new fundraising effort, RAC has begun a corporate sponsorship outreach program. Several corporate entities with ties to Amateur Radio will be offered distinct sponsorship categories. In exchange for sponsorships, corporations will benefit from varying levels of advertising, recognition and exposure.

I am also pleased to announce the Maple Leaf Legacy Circle. RAC is rolling out a "planned giving" program to allow members to leave a legacy supporting Amateur Radio. Amateur Radio has been good to Canada and to Canadians. Amateurs and many hams want to leave a legacy to help the growth of Amateur Radio in Canada and be recognized for that legacy. For more details and to ask questions please contact the RAC Head Office by email (raccomms@rac.ca) or visit the RAC website. Also check out the inside cover of this magazine.

Canadian Amateurs abound from coast to coast and RAC is an organization that needs to span the country from coast to coast. We have an office in Ottawa, but it is not actually a "head" office as fiscal and policy responsibility is held by the RAC Board which spans Canada in seven regions. The task of our Ottawa office is to provide quality client service to our members. RAC has working groups and committees that are located far from Ottawa. The HF/MF Committee, the Tower

Sur un autre sujet, je tiens à remercier Doug Mercer, VO1DM, pour son travail ardu à titre de responsable des Services extérieurs sur le terrain. Il s'y est dépensé de façon admirable depuis quatre ans. Son travail était difficile et il a gagné le respect de tous ceux qui ont travaillé avec lui. Après quatre ans, il voulait accorder plus d'importance à sa vie plus personnelle et s'est retiré du poste de CFSO. J'assumerai ses fonctions temporairement jusqu'à ce que nous recrutons un nouveau CFSO. C'est un travail majeur. Il ratisse très large. Beaucoup plus que les communications d'urgence. Le nouveau titulaire aura la tâche de mettre sur pied une véritable structure régionale.

Je veux rappeler à chacun que RAC tiendra son Assemblée générale annuelle en Colombie-Britannique en association avec la Pacific Northwest DX Conference du 25 au 27 juillet. Pour plus d'informations aller à : <http://orcadxccc.org/vancouver2014/home.html>. Nous vous prions de venir à la conférence et de participer à l'AGM; cependant, pour ceux qui ne pourraient se rendre en Colombie-Britannique, nous aurons encore recours à un moyen l'électronique pour vous joindre. Nous avons débuté cette façon de faire en 2011 à St. John's et voulons vérifier si ce procédé est en progression. Nous reconnaissons que ce n'est pas tout le monde qui peut assister en personne à l'AGM, mais nous voulons nous assurer que chaque membre ait la chance d'y participer. Ce ne sont pas toutes les sociétés qui tiennent des AGM, et nous devons profiter de cet avantage pour poser des questions et exiger des réponses de nos Conseils Exécutif et d'Administration.

Dans un effort pour améliorer notre capacité de diffusion de l'information et notre visibilité publique, RAC accroît l'utilisation de ses deux canaux sociaux : Twitter et Facebook. S.v.p aller sur Twitter @RACTWEETS et vérifier Facebook pour "RAC" ou "Radio Amateurs du Canada".

Nous avons aussi produit une nouvelle brochure pour faire la promotion de RAC. D'autres dépliants sont en développement. Aller à : <https://www.rac.ca/en/amateur-radio/>

Dans un nouvel effort de levée de fonds, RAC a lancé un programme de commandites. Plusieurs corporations impliquées dans la Radio Amateur se verront offrir différentes options de commandite. En échange, ces corporations bénéficieront de publicité et de visibilité accrue.

Je suis aussi heureux d'annoncer la création du « Cercle des légataires Maple Leaf ». RAC est à mettre sur pied un programme de « donation planifiée » pour permettre aux membres de laisser un héritage en soutien au radioamateurisme. La radio amateur a été profitable pour le Canada et pour les amateurs canadiens. Plusieurs amateurs veulent laisser un legs afin d'aider à la croissance de la radio amateur au Canada, et s'assurer que ces dons soient légalement reconnus.

Pour plus de détails et pour vos questions veuillez communiquer avec le siège social de RAC par courriel raccomms@rac.ca ou visiter le site web de RAC. Aller aussi à la page de couverture de cette revue.

Les amateurs canadiens d'un océan à l'autre et RAC forment une organisation qui a besoin de prendre de l'expansion dans tout le pays. Nous avons notre bureau à Ottawa, mais ce n'est pas actuellement un véritable bureau « chef » parce que les responsabilités fiscales et les politiques relèvent du Conseil d'administration lequel est dispersé dans sept régions au Canada. Le rôle de notre bureau à Ottawa est de procurer des services de « qualité client » à nos membres. RAC a travaillé avec des groupes et des comités localisés loin d'Ottawa. Le comité HF/MF, celui sur les tours d'antenne, un autre sur les gérants de section, le groupe de travail d'Industrie Canada, pour en nommer quelques

Committee, the Section Manager Committee, the Industry Canada Working Group, to pick some examples, have members in separate cities and provinces. We need to work harder to support all these entities. Back in 2010, the issue of a virtual office arose as a cost saving measure. The thinking was that if we moved to a virtual office we would save money by scrapping our bricks and mortar lease. This action was considered in order to stave off bankruptcy and organizational failure. This financial need is no longer the main driver as we have defeated the threat of bankruptcy. We need to develop tools and processes to support our staff and volunteers no matter where they are in our country and we are undertaking a review of our organizational needs and the tools required to support those needs no matter where that volunteer or staff member is located. We will need to reach a decision on this matter in 2014 as our lease is up in 2015. Stay tuned. We will be asking committee members and other volunteers their views and proposals.

Our website updates will start rolling out in the first quarter of 2014. We have received many requests from members that the eTCA be available on other platforms such as iPod, iPad, iPhone and Android and our IT crew are making this happen as the first stage of the roll-out.

I would like to comment on where we stand as an organization. An organization such as ours stands as a tripod with three legs or poles. One pole being financial strength and administrative ability (resources), another pole being policy development capability (what we think is important to do) and the third pole being the capacity to execute (doing). The lack of any of these pole means that the organization cannot stand, i.e., it cannot function effectively. Policy development without the other poles is just magic thinking and a trap that many people fall into. Developing resources is necessary to get the things done that we need to do and not an end in itself. We need to continue to strengthen each of these poles and we have worked hard and watched them strengthen over the last few years. The organization is being strengthened in order to meet its objectives. I remind our members of our bylaws (constitution) which outlines the purpose of RAC:

The objectives of the organization are (from our bylaws):

- 1) To represent and act as a liaison and coordinating body for Canadian Amateur Radio associations, societies, organizations and individual Radio Amateurs.
- 2) To act as a liaison organization between its members and other Amateur Radio organizations within and beyond Canada.
- 3) To represent Canadian Radio Amateurs in policy decisions regarding international issues and regulations that affect Amateur Radio within the International Telecommunications Union (ITU) and at meetings and conferences of the international Amateur Radio community including the International Amateur Radio Union (IARU).
- 4) To act as a liaison organization and consultative body to municipal, provincial and federal governments in matters concerning the Amateur Service.
- 5) To promote excellence, the state of the art, and the interests of Amateur Radio's many varied activities through a program of technical, regulatory and general information within the Amateur Radio community and to the Canadian public.

uns, possèdent des membres dans différentes villes et provinces. Nous devons travailler fort pour soutenir toutes ces entités. En 2010, l'idée d'un « bureau virtuel » fut mise de l'avant pour réduire les coûts. Le but était à l'effet que si choisissons un bureau virtuel nous sauverions de l'argent en louant moins de locaux. Cette décision fut prise dans le but d'éviter la banqueroute et l'échec de l'organisation. Le besoin financier n'est plus la raison principale puisque nous avons surmonté la menace de banqueroute. Nous devons développer des outils, des moyens et des plans pour soutenir nos employés et nos bénévoles peu importe où ils sont au pays. Nous avons entrepris de revoir nos besoins organisationnels et les « outils » requis pour faire face à ces besoins, le lieu de travail des bénévoles et des employés important peu. Nous devons prendre une décision en 2014 ; notre bail prend fin en 2015. Demeurez à l'écoute. Nous demanderons à nos membres de comités et autres bénévoles de nous faire connaître leurs points de vue et leurs propositions.

Nos mises à niveau du site web débiteront au cours des trois premiers mois de 2014. Nous avons reçu plusieurs demandes de nos membres à l'effet que eTCA soit disponible sur d'autres plates-formes telles que iPod, iPad, iPhone et Android. Notre personnel spécialisé s'y consacre et en a fait la première étape de la mise à niveau de nos plates-formes internet.

J'aimerais commenter notre situation en tant qu'organisation. Une organisation comme la nôtre, tel un trépied, possède trois pôles d'appui. Un premier pôle est la force financière et sa capacité administrative (ressources), un autre est la politique et la capacité de développement (ce que nous estimons important à faire) et le troisième la capacité d'exécution (le faire). Une faiblesse à l'un de ces pôles signifie que l'organisation est en déséquilibre ; qu'elle ne peut fonctionner efficacement. Une politique de développement sans les autres pôles devient de la pensée magique et une « trappe » dans laquelle plusieurs personnes sont tombées. Les ressources au développement sont nécessaires pour que les choses s'accomplissent, et non une fin en soi. Nous devons poursuivre la consolidation de chacun des pôles. Nous y avons travaillé durement et nous les avons vu se solidifier au cours des dernières années. L'organisation doit se renforcer dans le but de réaliser ses objectifs. Je rappelle à nos membres ce que disent nos règlements (constitution) ; ils tracent le pourquoi de RAC:

Les objectifs de l'organisation sont (selon nos règlements):

- 1) Représenter et servir de bureau de liaison et de coordination pour les associations radioamateurs canadiennes, les sociétés ainsi que pour les radioamateurs sur une base individuelle.
- 2) Servir de bureau de liaison entre les membres de RAC et d'autres organisations de radioamateurs à l'extérieur du Canada.
- 3) Représenter les radioamateurs canadiens lors de décisions politiques concernant les questions internationales et les règlements qui affectent les radioamateurs dans le cadre des activités de l'Union internationale des télécommunications (UIT) et aux conférences de l'Union internationale des radioamateurs (UIRA).
- 4) Servir de bureau de liaison et d'organisme de consultation pour le gouvernement fédéral, les gouvernements provinciaux et municipaux dans les domaines concernant les services amateurs.
- 5) Promouvoir l'excellence, le respect des règles de l'art et les intérêts très variés des radioamateurs au moyen de la diffusion d'informations techniques, réglementaires et générales au bénéfice du milieu radioamateur et de la population du Canada.
- 6) Maintenir une présence concrète pour la communauté radioamateur en ayant un bureau corporatif et une adresse d'affaires.

CANADIAN AMATEURS ARE NOW AUTHORIZED FOR OPERATION ON FIVE 60 METRE 5 MHZ CHANNELS

Prepared by Norm Rashleigh, VE3LC

Radio Amateurs of Canada applauds Industry Canada for releasing the decision paper, January 22, as an outcome to consultation SMSE-010-012, May 2012, thus authorizing five 60 metre channel allocations for the Amateur Service in Canada. The 5 MHz spot frequencies are the same as authorized in the USA having essentially the same restrictions with respect to power, modes of operation and channel bandwidth limitations. A sixth Canadian exclusive channel that was proposed in the consultation could not be realized for reasons explained in the decision paper that can be seen online at:

<http://www.ic.gc.ca/eic/site/smt-gst.nsf/eng/sf10623.html>

The 60 metre frequencies were added to the schedule of Amateur allocations as a direct result of briefing papers and a formal petition prepared and sent by Radio Amateurs of Canada to Industry Canada in March of 2010. Soon after the RAC request, the ARRL petitioned the Federal Communications Commission (FCC) for a change to one of the US frequencies and changes to the rules of operation; these didn't come into effect until March of 2012. This delayed the progress in the Canadian action as harmonization with the Americans was requested and necessary. Nevertheless, the release of the decision took more than a year from the close of the comment period following the consultation. Because of the delay awaiting the decision, Industry Canada, within the authority of the Spectrum Operations Branch, allowed Canadian Amateurs to apply for a special "Developmental" licence on the designated 60 metre channels using a VX9 call sign. Despite an annual fee for the Developmental licence many Canadian Amateurs took advantage of this opportunity. Now, however, the Developmental licence is no longer necessary and Amateurs holding such authorizations should let them lapse and use their regular Amateur call sign while operating on the 5 MHz channels.

Specifically, Industry Canada has authorized the following five frequencies for use by the general Canadian Amateur Radio community with HF operating privileges: 5332, 5348, 5358.5, 5373 and 5405 kHz. Because the channels are in spectrum space shared with other licensed users, Amateur Radio operations have secondary status and therefore must not cause interference to primary status users

and Radio Amateurs cannot claim protection from interference. The maximum power is limited to 100 watt effective radiated power (ERP) referenced to a dipole antenna. Several specific emission designators are indicated in the Industry Canada ruling which will allow modes including SSB (upper sideband), RTTY, Data (permitting Pactor III and PSK31) and CW. The maximum permissible bandwidth is limited to 2.8 kHz and the transmission for all modes must be centred on the frequencies indicated above. This rule requires special attention for all Radio Amateurs using these frequencies. For upper sideband, this will necessitate setting the dial frequency 1.5 kHz below the channel frequencies noted above. Therefore, actual dial frequencies will be 5330.5, 5346.5, 5357.0, 5371.5 and 5403.5 kHz.

However, many late model HF radios have the 60 metre frequencies as pre-programmed channels and display the channel frequency without the -1.5 kHz offset. This applies to the Yaesu FT-8xx series radios. When operating CW, again, the emission must be right on the channel frequency denoted in the rules. And for other modes, again, the middle of transmission bandpass must be set the same. Some older radios may not have the pre-programmed 60 metre frequencies or indeed may not allow transmission on 60 metres at all. Operating on the new channels could require modifications to "open up" the transceiver for out of band operation. Great caution should be exercised if such modifications are contemplated. For some of the pre-programmed radios with 5 MHz channels, only operation on USB can be selected.

Since operating on the 60 metre channels is quite different from operating on traditional HF bands, Radio Amateurs should read the RAC instructions publication "Amateur Radio 60m Operation Information" that can be found at: https://www.rac.ca/downloads/60Mopsinfo_en.pdf

Along with the 60 metre ruling, Industry Canada has also released an updated version of RBR-4, Issue 2, "Standard for the Operation of Radio Stations in the Amateur Radio Service" that can be found at: <http://www.ic.gc.ca/eic/site/smt-gst.nsf/eng/sf10650.html>

This new version of RBR-4 updates the schedules of Radio Amateur frequency allocations including the 5 MHz channels and operating restrictions. The update to the tables also includes the 135.7 – 137.8 kHz LF band, and changes to the 220 MHz spectrum that came into effect several

years ago. However, Canadian Amateurs must still await the decision on the domestic authorization for the 472 – 479 kHz allocation that was the part of the proposed revisions to the Canadian Table of Frequency Allocations Gazetted in September 2013; this is not included in the update of RBR-4. It appears that no other changes are evident in the new release.

Access to this new band is the result of the efforts of members of the Radio Amateurs of Canada team involved in this initiative who prompted and followed up on the required work. They and the Industry Canada officials who worked long and hard, in between other major priorities, to achieve the desired new spectrum for the Amateur Radio Service deserve the thanks of all Canadian Radio Amateurs who now benefit from their work. It is very much appreciated.

References:

Industry Canada Decision to SMSE-010-012 "Policy and Technical Framework for Amateur Service Use in the 5 MHz Band": <http://www.ic.gc.ca/eic/site/smt-gst.nsf/eng/sf10623.html>

Industry Canada RBR-4, Issue 2 "Standards for the Operation of Radio Stations in the Amateur Radio Service": <http://www.ic.gc.ca/eic/site/smt-gst.nsf/eng/sf10650.html>

Radio Amateurs of Canada "Amateur Radio 60m Operation Information": https://www.rac.ca/downloads/60Mopsinfo_en.pdf

ARRL, "60-Meter Operations – New Privileges and Recommended Practices". This link provides further information framed in the American context but the technical considerations are relevant: http://www.arrl.org/files/file/Regulatory/Recommended_Practices_Version_6_5.pdf

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LES RADIOAMATEURS CANADIENS PEUVENT MAINTENANT UTILISER CINQ CANAUX À 5 MHZ DANS LA BANDE DE 60 METRES

Rédigé par Norm Rashleigh, VE3LC

Radio Amateurs du Canada (RAC) se réjouit de l'annonce par Industrie Canada, le 22 janvier dernier, des décisions prises au terme de la consultation publique SMSE-010-012 lancée en mai 2010 selon lesquelles le service de radioamateur canadien reçoit l'attribution de cinq canaux dans la bande de 60 mètres. Les fréquences autour de 5 MHz sont les mêmes que celles autorisées aux É. U. et sont soumises aux mêmes restrictions concernant la puissance, le mode d'émission et la largeur de bande. La demande pour un 6^e canal pour l'usage à l'intérieur du Canada n'a pas pu être exaucée pour les raisons exprimées dans le rapport décisionnel accessible en ligne :

<http://www.ic.gc.ca/eic/site/smt-gst.nsf/fra/sf10623.html>

L'ajout de fréquences dans la bande de 60m pour le service radioamateur est la conséquence directe de la présentation de rapports documentaires et d'une demande formelle de RAC auprès d'Industrie Canada en mars 2010. Peu de temps après, l'ARRL demandait à la FCC de modifier l'une des fréquences ainsi que les modalités d'opérations applicables aux É. U., chose qui ne s'est concrétisée qu'en mars 2012. Ceci a retardé l'avancement du dossier au Canada puisque l'harmonisation des fréquences avec celles des É. U. était exigée. Finalement, la décision fut rendue plus d'un an après la fermeture de la période des commentaires qui fait suite à la consultation. Pendant cette période d'attente, Industrie Canada, de concert avec la Direction des opérations de la gestion du spectre, permettait aux radioamateurs canadiens d'obtenir une licence de station « expérimentale » avec indicatif d'appel VX9 pour les canaux désignés dans la bande de 60m. Malgré les frais annuels demandés pour une station expérimentale, de nombreux radioamateurs canadiens ont profité de cette possibilité. En ce moment, cependant, une telle licence n'est plus nécessaire et les détenteurs actuels peuvent la laisser tomber pour n'utiliser que leur indicatif habituel.

Précisément, Industrie Canada autorise les radioamateurs canadiens ayant des privilèges d'opération sur ondes courtes (HF) à utiliser les cinq canaux suivants (en kilo Hertz) : 5 332, 5 348, 5 358,5, 5 373 et 5 405. Étant donné que ces

fréquences sont dans un spectre partagé avec d'autres utilisateurs autorisés et que les radioamateurs en sont des usagers secondaires, les amateurs ne doivent pas causer d'interférence aux usagers primaires et pourraient devoir subir les interférences causées par ces derniers. La puissance apparente rayonnée maximale est de 100 W en référence à une antenne dipôle. Industrie Canada énumère plusieurs modes et désignatifs dans son document, entre autres les modes BLU supérieur (BLS), RTTY, données (Pactor III et PSK31) ainsi que les ondes entretenues (CW). La largeur de bande maximale permise pour tous les modes est de 2,8 kHz centrée sur les fréquences indiquées ci-dessus. Cette règle exige de tous les radioamateurs une attention particulière. En effet, dans le mode BLS, la fréquence au cadran devra être réglée à 1,5 kHz en dessous des fréquences spécifiées, soit 5 330,5; 5 346,5; 5 357,0; 5 371,5 et 5 403,5 kHz.

Cependant, certaines radios HF récentes ont les fréquences pré-réglées pour les canaux de la bande de 60m et affichent les fréquences sans tenir compte de la compensation de -1,5 kHz. C'est le cas pour la série FT-8xx de Yaesu. En mode CW, la fréquence de transmission doit tomber exactement sur les fréquences indiquées dans les règles, et pour les autres modes, c'est le point médian de la largeur de bande qui doit le faire. Certaines radios plus anciennes n'ont peut-être pas les fréquences pré-réglées pour les canaux de la bande de 60m, ou ne permettent même pas de transmettre sur cette bande. Alors des modifications pour « élargir » l'appareil pour permettre de transmettre hors bandes seront sans doute requises; procédez avec grand soin dans ces projets de modification. Noter aussi que certaines radios équipées de canaux pré-établis sur 5 MHz ne permettent que le mode BLS.

Comme l'utilisation de la bande de 60m diffère considérablement de celle des bandes traditionnelles en HF, les radioamateurs sont invités à consulter le guide publié par RAC à ce sujet sur son site Web : https://www.rac.ca/downloads/60Mopsinfo_fr.pdf

En plus d'annoncer la bande de 60m, Industrie Canada publie la 2^e édition de son document IPR 4 « Normes sur l'exploitation des stations radio autorisées dans le service de radioamateur » accessible en ligne : <http://www.ic.gc.ca/eic/site/smt-gst.nsf/fra/sf10650.html>

Cette nouvelle version du IPR-4 comprend les mises à jour au tableau des attributions des fréquences pour les stations radioamateur, particulièrement les paramètres et les restrictions concernant les nouveaux canaux à 5 MHz, la bande des ondes longues (LF) entre 135,7 et 137,8 kHz ainsi que les changements au spectre de 220 MHz qui sont entré en vigueur il y a quelques années. Les radioamateurs canadiens restent cependant dans l'attente d'une prise de décision à propos de leur demande déposée officiellement en septembre 2013 concernant la bande de 472 à 479 kHz pour des communications limitées au territoire canadien. Il n'y a rien d'autre à signaler dans cette nouvelle édition.

L'attribution de cette nouvelle bande est le résultat du travail de membres de l'équipe de RAC qui ont pris l'initiative de déposer la demande et de travailler à sa réalisation. Ces personnes, ainsi que les fonctionnaires d'Industrie Canada qui ont travaillé sans relâche, malgré d'autres projets d'envergure, à l'obtention du spectre demandé pour le service de radioamateur, méritent les remerciements et la reconnaissance de la communauté des radioamateurs canadiens qui bénéficie maintenant de leur travail. Merci beaucoup!

Ouvrages de référence :

Industrie Canada, décisions prises sur l'avis SMSE-010-012 « Cadre politique et technique — Utilisation de la bande de 5 MHz par le service de radioamateur » : <http://www.ic.gc.ca/eic/site/smt-gst.nsf/fra/sf10623.html>

Industrie Canada, « IPR-4 — Normes sur l'exploitation des stations radio autorisées dans le service de radioamateur » 2^e édition : <http://www.ic.gc.ca/eic/site/smt-gst.nsf/fra/sf10650.html>

Radio Amateurs du Canada, « Amateur Radio 60m Operation Information » : https://www.rac.ca/downloads/60Mopsinfo_fr.pdf

ARRL, « 60-Meter Operations – New Privileges and Recommended Practices ». Ce lien fournit des renseignements supplémentaires dans le contexte des États-Unis mais l'aspect technique s'applique chez nous : http://www.arrl.org/files/file/Regulatory/Recommended_Practices_Version_6_5.pdf

(Traduction par René Lévesque, VE2CNJ)



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SIX METRES AND DOWN

cold to very warm – so check them. Water is always an issue as it will find its way in through the tiniest break. Check fittings for corrosion as well if they have been up for a few years. To seal your connections use self-amalgamating tape to wrap the connections and then layer regular electrical tape over that to protect it from UV damage. Just a word of caution, some guys have tried to seal with RTV but found that the acetic acid emitted by the RTV causes lots of problems; so if you go that route make sure you use something that doesn't contain acetic acid (aka vinegar). 3M's Scotchkote electrical coating works very well for this purpose.



Spring brings DX...

Well, by the time this hits the print we should be getting close to some spring weather conditions. That means antenna work can be done in comfort and safety.

Given the ice storm that hit us in Toronto, I was worried that I'd be doing a bit of additional antenna work, and maybe replacing my 7-element yagi, but all came through ok.

Having said that, winter can be pretty rough on those VHF and UHF antennas, and spring brings the chance to get things fixed up and shipshape for those troop openings – the 2014 Sporadic E season, Meteor Scatter, Aurora and other openings – as well as the VHF/UHF Spring Sprints and, of course, the ARRL June VHF QSO Party and the CQ World Wide VHF.

With the arrival of warmer weather, it will be time to inspect antennas, make repairs, replace and refit. There are a number of areas that may need attention:

1) Coax fittings: VHF ops mostly use Type N or ANSI type fittings on coax and of course these need to be inspected. Crimp type connectors can pull apart – in some cases due to thermal cycling from very

2) Coax Cable: if you use Andrew Heliax or something similar – and if everything is watertight – you should be fine for many years. I have some runs that are 30+ years old now and they show no degradation. On the other hand, your more common coax cables do have a limited lifetime due to the migration of plasticizers through the insulation, the migration of the centre conductor, and stress. So plan to replace any jumpers that are out in the weather at least every five years.

3) Rotors: depending on the design, water can collect inside and create problems. Check your rotor for corroded electrical connections, and if it has been up for a long time consider pulling it apart and regreasing the ball bearings. A shot of paint may be in order to improve the looks too.

4) Towers: check the bolts for tightness and look for rust. You can extend the life of any tower with a bit of care, some elbow grease and paint. Of course, don't forget that tower work is hazardous so make sure you use a climbing belt and ideally a fall arrest system when at height.

5) Check your grounding system: In Ontario for instance, the *Lightning Rods Act* specifies an annual visual examination and a check of the ground system performance every five years. Not a bad idea given that your tower is a pretty good lightning rod!

6) If you have tower-mounted relays and preamps, make sure you inspect their enclosures to ensure that drain holes are clear, that spiders or other critters haven't wintered over, and again look for corrosion or loose connections due to thermal cycling.

If all checks out then you are good for another season of fun on the bands above 50 MHz.

50 MHZ ACTIVITY

I was not too active during the Christmas season due to necessary repairs after the July 8 flooding and then the pre-Christmas ice storm and power outage, but we did manage to sneak on a bit.

Thankfully, the antennas survived the ice and wind without problems, although my UHF TV antenna wouldn't rotate due to ice in the tower collar. Fortunately, the thaw fixed that – all the more reason to keep it greased I guess, hi. The above photo is a shot of my antennas "the morning after" the ice.

November 9 found TI5/N5BEK at S meter pinning strength for over an hour into FN03, thanks in part to a minor solar disturbance that kicked the North/South path open.

December 10 brought winter Es with K9EWZ, KOHA and KW0W worked on single hop Es.

December 14 brought some good meteor scatter burns from the Geminids meteor shower, with strong backscatter signals from the midwest and east coast.

January 10, 2014 was interesting as the solar flux was sitting at 184 and the A Index at 10 with K3 and a bit of Aurora and Aurora Es. Doug, VE1PZ, was worked with 59+ signals and he was busy working all over the midwest from Nova Scotia.

In addition, some of the guys were reporting strong F2-like backscatter on signals between the midwest and the east coast, reminiscent of what we normally hear during periods of high MUF during past cycles. So despite no solid F2 propagation in the northern realms, the ionosphere was trying to provide some DX!

50 MHz PROPAGATION 2014

As mentioned previously, we had a close call with Cycle 24 F2 over the Christmas period, with the solar flux soaring up and up. One small problem was that this was beneficial to those at lower geomagnetic latitudes, primarily Central and South America, where they found openings to Southern Europe, the South Pacific, China and Japan. Unfortunately for us, this happened a bit too late in the F2 season to kick the band open and we found the MUF was consistently sitting at 42 MHz for much of the time.

Given that last summer the E season wasn't very productive, one could not be faulted for considering QSY'ing off 50 MHz, but I do believe, based on the last 35 years of operating, that this summer we will see a strong E season again on 50 MHz and above. Unfortunately, I also doubt that we will see any F2 propagation on 50 MHz this cycle unless we see a radical change in the sun's behaviour. Will we be entering a Maunder minimum? Will the next few solar cycles be weak or absent? Will this lead to a shift in the climate, leading to a mini ice age? Stay tuned and find out!

HIGHER BANDS

The ARRL January VHF Sweepstakes Contest was a good one for those who were able to get on – and we heard that there was some pretty good DX worked on 144 MHz between FN03 and the midwest EN grids. Judging by the scores, some of our intrepid rovers made out quite well! I hope to have more information for the next column and encourage you to check out 144.2 MHz SSB.

RTL DONGLES

As the popularity of these little devices grows, more and more applications are appearing, not only on VHF/UHF and SHF but microwave as well and on HF!



Using downconverters, you can extend the range of these devices at will, and using upconverters you can cover DC – 30+ MHz easily. With the available software or some programming skills, you can pretty much cover what you want – whether it's decoding NOAA weather images from satellite, monitoring PAL/NTSC broadcasts, monitoring meteor scatter radars (like the one at UWO in London), decoding Aircraft beacons, ship beacons or monitoring your local repeater. The above photo shows my upconverter and dongle hooked up to the IF output of my K3.

Well that's it for now. Happy New Year and lets see what DX 2014 brings!

– 73, Dana, VE3KU/VE3DSS



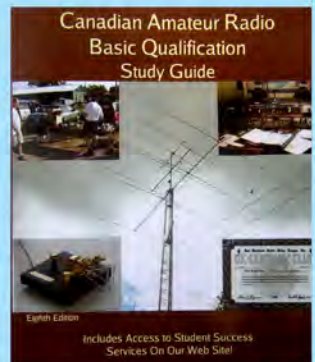
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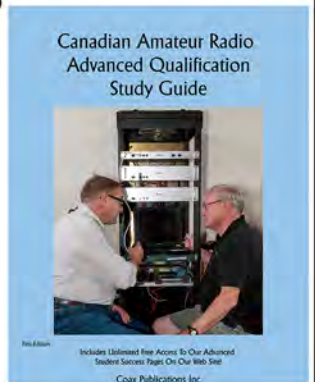


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ANTENNAS & TRANSMISSION LINES



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INTRODUCTION

This part of the series discusses the design and operation of toroidal transformers used to match halfwave end fed antennas that were the subject of the January-February 2014 TCA column on Antennas and Transmission Lines.

Although this is a very specific application, the results pave the way for many other applications such as RF suppressors, high Q filter design, general antenna matching devices and antenna traps/loading coils.

The article presents a very simple method for designing the transformers once the core material has been selected. A few examples are given along with measured results.

The article also shows how to select the core to give the expected performance such as bandwidth and power level.

Note: This article uses TCA hotlinks to provide access to enriched media from the RAC website. For more information, please go to <http://www.rac.ca/tca>.

END FED HALFWAVE HF ANTENNAS (Part 2 of 2)

There are two types of cores that can be used. These are ferrite and powdered iron cores. They have very different characteristics but either can be used depending on the application.

Ferrite cores generally have very high winding inductance and low Q with some exceptions while powdered iron cores have a much lower winding inductance and a very high Q up to 200. Ferrites that are commonly used in the HF bands can have a ferrimagnetic resonance frequency occurring in one of the bands of interest. The ferrimagnetic frequency is the frequency where the core $Q = 1$.

There are two fundamental limits that must be considered:

First, large power levels cause the cores to heat up. The maximum safe operating core temperature depends on the core type and core mix. Commonly used ferrite -43 material has a curie temperature of 130°C where abrupt changes in magnetic properties occur. It is good practice to limit the operating core temperature to 100°C . The temperature limit for powdered iron material is approximately 95°C .

Second, these cores are fabricated from magnetic materials that exhibit hysteresis and core saturation. The core magnetic flux levels must be kept well below core saturation, B_{sat} , in order to prevent harmonic distortion of the output signal. It is common to limit the magnetic flux, B , to $0.2 B_{sat}$ for this purpose. Magnetic flux, B , depends on the applied voltage across the coil which can be very high for halfwave end fed antennas.

Distortion is hard to measure but can easily be estimated using a simple formula given in TCA hotlink 1. In most cases the operation of the transformer is limited by heat.

The design process presented here is based on experimental methods. A theoretical approach can also be used but this relies heavily on a deep understanding of magnetic materials applied to circuit theory. This approach is interesting and has been treated in depth by ON9CVD (see TCA hotlink 1). I highly recommend his series of articles for those interested in exploring the subject in greater depth.

The following sections discuss transformers in general followed by some experiments and then present a method for designing these transformers for your specific application.

ABOUT TRANSFORMERS

IDEAL TRANSFORMERS

There are two basic transformer types that we use for matching halfwave end fed antennas. These are shown in Figure 1 on the next page. Ideal transformers (see TCA hotlink 2) have no losses or parasitic elements. The coils are completely coupled with no leakage of magnetic fields outside of the core. The first type is the conventional transformer that uses two windings as shown. These windings are not DC coupled. The second type is called an autotransformer (see TCA hotlink 3) which has its roots in the power industry.

Both transformers are induction type where magnetic fields are mainly contained within the core being used.

The output voltage for each type is given as:

$$V_2 = \frac{N_2}{N_1} V_1 \quad [V]$$

Where V_2 is the output voltage, V_1 is the input voltage and N_1 , N_2 are the number of turns on the primary and secondary windings respectively.

For both transformers, the input impedance Z_{in} is given by:

$$Z_{in} = Z_L \left(\frac{N_1}{N_2} \right)^2 \quad [\Omega]$$

Where Z_L is the load impedance.

This simple formula states that the input impedance is equal to the load impedance multiplied by a constant.

As an example, if Z_L equals $3100\ \Omega$, $N_2 = 24$ and $N_1 = 3$, then $Z_{in} = 48\ \Omega$.

Now, if the load impedance is an inductor with a reactance of $1000\ \Omega$ then the input impedance is also inductive with a reactance of $15.6\ \Omega$. This idea has a very practical result for our transformer designs:

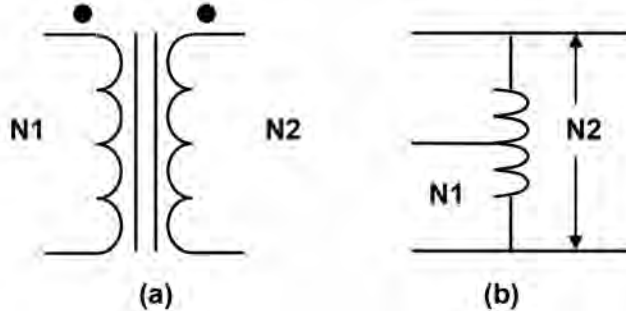
An unwanted reactive load can be tuned out by placing the correct capacitor or inductor on either the input or output side of the transformer. Placing the tuning element at the input or output is the designer's choice. Very small or high valued capacitors are usually avoided.

NON-IDEAL TRANSFORMERS

A more realistic circuit for a toroidal transformer is shown in Figure 2 where an inductor, L_m , is added to the output terminals to account for the fact the winding inductance of these toroids is not infinite as assumed in the ideal case. A resistor, R_p , is also added to account for core losses.

Figure 1: Transformer Types

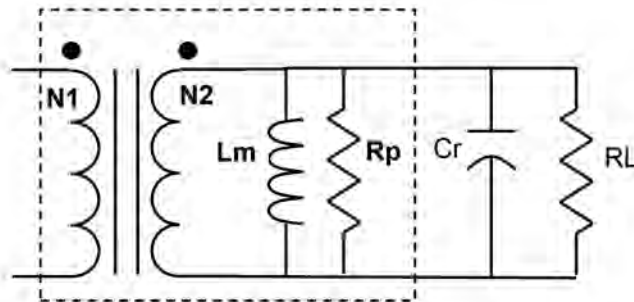
Transformer Types
Ideal Circuit Model, No Losses
(a) Conventional Transformer
(b) Autotransformer



For Ideal Transformers: Turns Ratio = $T = N2/N1$ for both cases. This is not true for real transformers. T depends on $L1$, $L2$ where $L1$ = the primary inductance and $L2$ = the secondary inductance. Typically, $N2 \approx 23$ and $N1 = 3$ for end fed antennas.

Figure 2: Transformer Circuit Model

Transformer and Circuit Model
Including Magnetizing Inductance (L_m)
Core Loss R_p



Dashed box represents the transformer. L_m is the magnetizing or secondary inductance. R_p represents the core loss. L_m is resonated by the capacitor C_r . The load is R_L . At resonance, the input impedance $R_{in} = R_L / (1 + (N1/N2)^2)$. For example, if $N1 = 3$, $N2 = 21$, $R_L = 3100$ Ohms and $R_p = 10000$ Ohms, then $R_{in} = 48$ Ohms.

Figure 2 also shows a load consisting of resistor, R_L , and capacitor, C_r , connected in parallel. The capacitor value is set to resonate the circuit at the frequency of interest. Once we have found L_m and R_p , the complete performance of the transformer follows by applying circuit theory. These parameters can be found by analysis or measurement and are frequency dependent. This means we can find the total loss in the transformer and the power dissipation that occurs given the transmitter output power.

The model used here does not include copper loss in the wires (usually smaller than core loss), leakage inductance (it can be tuned out but lowers the bandwidth) and parasitic capacitances which can be minimized by proper winding techniques. Space the winding around the coil approximately 80% to keep parasitic capacitances low.

In the example shown in Figure 2, the input impedance is approximately 48 Ω . Here it assumed that $N1 = 3$, $N2 = 21$, $R_L = 3.1$ k Ω and $R_p = 10$ k Ω . Notice the core loss has a big impact on the input impedance. Here it assumed that the winding inductance has been tuned out by the load capacitor. Compare this with the previous example for an ideal transformer. The number of turns has been reduced from 24 to 21 turns because of core loss. This is very typical for most cases of interest.

FOUR EXPERIMENTS

Before presenting the design approach, I will show you the results of four experiments that I have conducted which lead to the core selection and transformer design method. See Figure 3 on the next page for a photograph of the coils and transformers used in the four experiments.

Experiment #1: Measurement of a Ferrite Coil

The purpose of this experiment is to look at the properties of ferrite material. It simply consists of winding four turns of enamelled wire on a ferrite toroid from Fair-Rite corporation (see TCA hotlink 4). I wound four turns on the coil to keep the reactance within the measuring range of the AIM 4170 meter that was used to collect the data. The toroid is an FT114-43 which is commonly used. The measurement consists of observing the reactance and series resistance of the coil as measured in the HF bands. These values form the basis for the design of a transformer (see Figure 4).

There are three things to notice from this experiment:

- 1) The coil reactance and resistance are equal at 20 MHz. At this frequency, the Q of the coil equals 1. Recall that the Q of a coil is defined as the ratio of its reactance to series resistance. This material is a poor choice for making resonant coils used in filters or in high Q traps/loading coils for antennas.

- 2) The value of the coil reactance is very high for a coil with only four turns. Since the inductance varies with the turns squared, its reactance will be extremely high if it is wound with 23 turns.

- 3) The coil resistance and inductance vary with frequency which makes the transformer design a bit more difficult

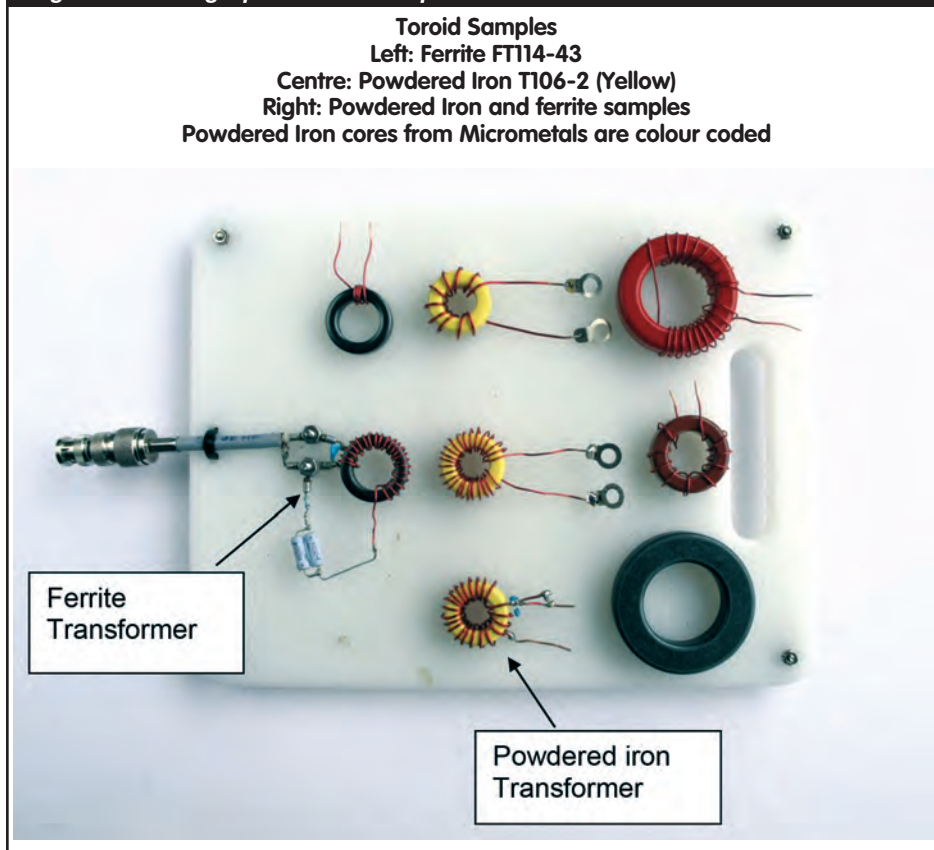
Experiment #2: Measurement of a Powdered Iron Coil

This experiment repeats Experiment #2 except that a T106-2 powdered iron core from Micrometals (see TCA hotlink 5) is used to show the difference between ferrite and powdered iron material. The measured results are shown in Figure 5.

Again, there are three things to notice from this experiment:

- 1) The coil reactance is much greater than the coil resistance. In fact the resistance is so small that the AIM 4170 cannot read its value accurately. In this case there were 23 turns wound on the toroid and the reactance is approximately 800 Ω at a frequency of 18 MHz. The expected reactance for a FT114-43 ferrite core with 23 turns is 10 k Ω compared with 800 Ω for the powdered iron coil.

Figure 3: Photograph of Core Samples



Experiment #3: Measurement of a Ferrite Transformer

Figure 6 shows the input impedance of a complete ferrite transformer using core type FT114-43. The transformer is wound as an autotransformer with 22 total turns tapped at three turns. A tuning capacitor of 100 pF is placed across the input between the ground and the tap point. The transformer was designed to resonate in the 20 metre band. The load resistance was set to 3300 Ω . Notice that this transformer is quite broadband with a 1.5 SWR bandwidth covering the 80 to 10 metre bands. This transformer type can be used for multiband antennas.

Experiment #4: Measurement of a Powdered Iron Transformer

The final experiment shows the results for a powdered iron transformer using a T106-2 core (see Figure 7). In this case the coil uses an autotransformer as before. The total number of turns is 21 and the input is tapped at three turns as before. Here the load is 3300 Ω and a tuning capacitor of 21 pF is connected on the output side of the transformer across the load resistor. Notice that this transformer type is narrow band with a 1.5 SWR bandwidth of approximately 800 kHz. So this transformer type can be used for monoband applications only.

THE DESIGN PROCESS

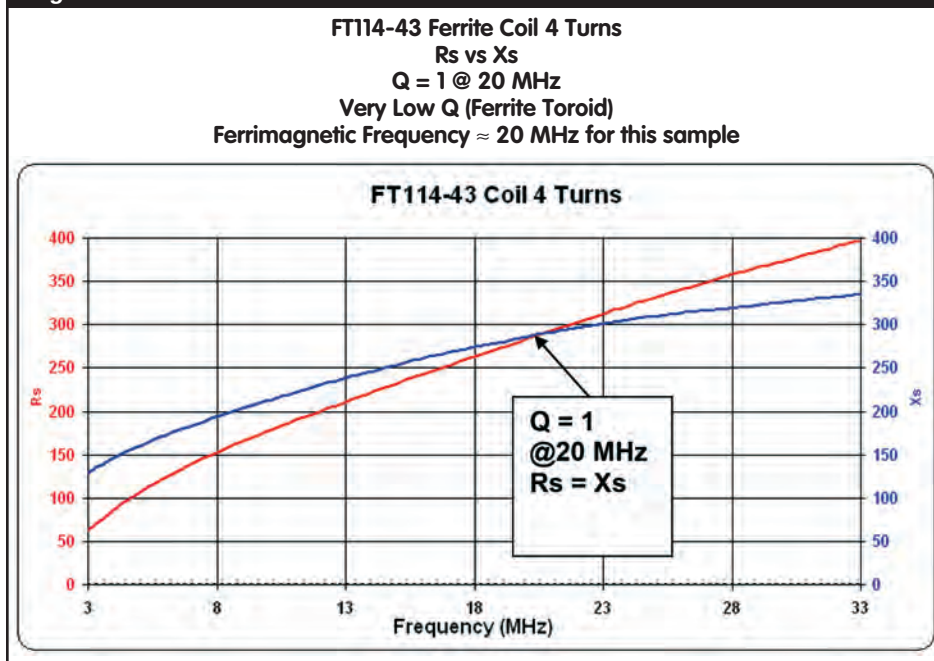
To make a suitable transformer for your application and band of interest, a simple design process is outlined here. The process is entirely experimental that can be accomplished with low cost test equipment.

Here is the approach that I have used.

1) Decide on the application such as monoband or multiband. Select a ferrite core for broadband applications. The size of the core depends on the power level needed. Small cores (12 mm outside diameter) are fine for QRP applications while large cores (60 mm) are needed for 50 W continuous power levels and above. See TCA hotlink 7 for a few examples of different core sizes.

2) You can now use my design examples to get a starting point for your particular design. There are only two parameters to consider. These are the number of turns on the secondary winding (keep three turns on the primary winding) and the value of the tuning capacitance. First build a transformer with no load or tuning capacitance. Use 23 turns on the secondary of transformer independent of the core size or material selected. This can be

Figure 4: Ferrite coil measurement

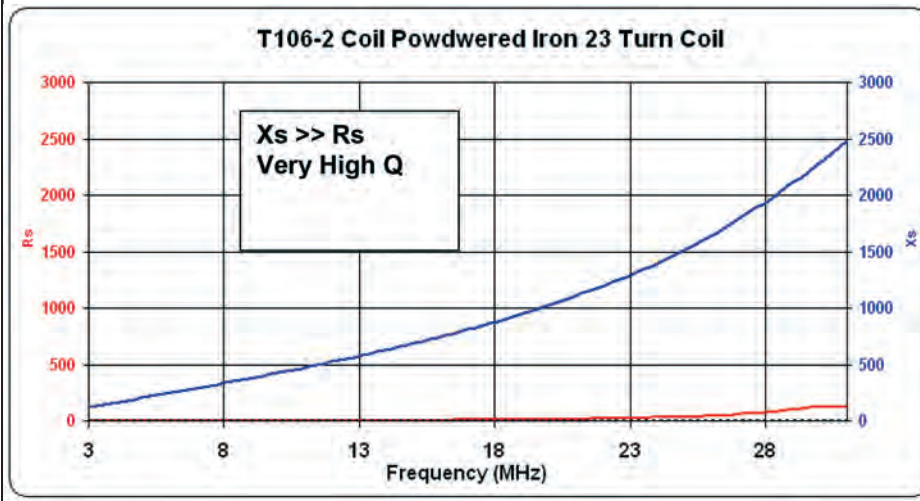


2) The reactance increases dramatically as the frequency approaches the coil self resonance frequency due to parasitic capacitance. To minimize the effects of parasitic capacitance, we space out the coil winding as much as possible around the toroid. The graph shows that the resonant frequency is greater than 33 MHz (around 40 MHz).

3) The coil Q is very high. High coil Q makes powdered iron cores a good candidate for monoband transformers and other items that need high Q such as resonators and traps/loading coils in antennas.

Figure 5: Powdered iron coil measurement

T106-2 Powdered Iron Coil; 23 Turns; Very High Q



fine-tuned on a second iteration of the design by removing a turn or two. The wire gauge should be around #18 or lower for high power applications and #20 gauge or slightly higher for QRP applications.

3) Now measure the inductance of the secondary winding using a simple L-C meter, or better yet, an inductance meter that can be used at the operating frequency of the transformer (MFJ259-B or equivalent). You can also check this measurement using an online calculator from Kits and Parts (see TCA hotlink 6). Don't be concerned if your measurements are considerably higher than predicted by the calculator because the calculator assumes that the winding is distributed around most of the toroid. Inductance will be higher if you wind the toroid with a small pitch.

4) Calculate the value of the required capacitance to be connected across the secondary winding using the following formula:

$$C_o = \frac{1}{4\pi^2 f^2 L} \text{ [F]}$$

Where L is the measured inductance and f is the centre frequency of operation.

For example, if $L = 5 \mu\text{H}$ and $f = 14 \text{ MHz}$, then $C = 25.8 \text{ pF}$. Note that in the formula, C is in farads, f in Hz and L in henry. If C is too small – as it will be if you use a ferrite core – place the capacitor across the input after scaling by the turns ratio, T , squared as shown below:

$$C_{in} = C_o T^2 \text{ [F]}$$

5) Now, build the transformer using the capacitor and 3300 Ω load. Measure the SWR at the resonant frequency using a low level SWR/impedance meter such as an MFJ259-B. If the measured frequency is too high or low, adjust the value of C . If the SWR is a bit high (>1.5) at resonance, the number of turns on the secondary will have to be reduced (one turn at a time). In some extreme cases, the number of turns will have to be increased (one turn at a time).

6) Finally test your transformer with a real antenna to see what the temperature rise of the core is under your intended usage: SSB, CW, RTTY etc. The average power being transmitted for SSB is much smaller than modes that use continuous power (100% duty cycle) so you will have to test the system accordingly. Temperature rise can be measured approximately using a simple infrared thermometer. Keep the temperature of the coil below 70° C.

Figure 6: Ferrite transformer measurement

FT114-43 Ferrite Transformer; 22 Turns Total, Tap @ 3 Turns
Auto Transformer Winding; Tuned for 14 MHz
1.5 SWR Bandwidth (3.5 to 28 MHz)

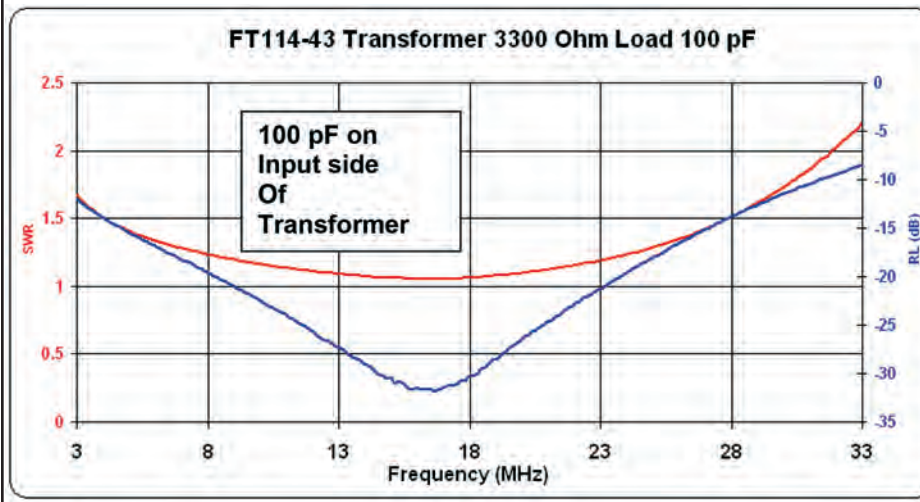
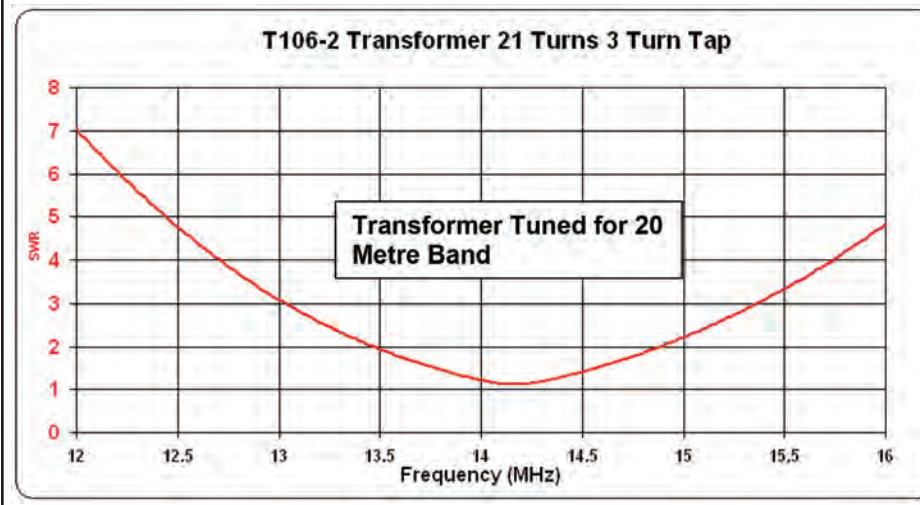


Figure 7: Powdered iron transformer measurement

T106-2 Powdered Iron Transformer; 21 Turns Total; Tapped at 3 Turns
3300 Ohm Load; 21 pF Tuning Capacitor



PRACTICAL ASPECTS

The most important thing to attend to is the very high voltage that will be presented across the toroid and tuning capacitor if it is located on the output terminals. The peak voltage for a power level of 100 W with a 3000 Ω resistor is 775 V. A practical way to construct this capacitor is to use a piece of coaxial cable, Teflon coax (RG 178 b/u), that can easily be trimmed to the correct size. Start off with a length of about 25 cm. See PD7MAA (see TCA hotlink 7) for an example of this process. All tuning can be done with low power non-inductive resistive loads (metal oxide film). Capacitors should be a ceramic type which have a Q of approximately 1600 in the HF range.

Toroid cores are available from several suppliers such as Kits and Parts who also provide a free online calculator. Simply select the core of interest (ferrite or powdered iron), the frequency and the number of turns. The calculator then gives the core inductance, reactance and the value of a capacitor required to resonate the core.

Another item is the issue of using a conventionally wound transformer or an autotransformer. The autotransformer does not have as tight coupling as the conventional transformer but it is easier to construct. Most applications use the autotransformer for narrowband applications using powdered iron cores and conventionally wound transformers with ferrites to enhance the bandwidth.

CONCLUSIONS AND DISCUSSION

This article presented the reader with a process for experimenting with toroidal transformers for use with halfwave end fed antennas. It showed the results of four experiments and a design technique that is useful for all of the possible configurations and power levels that can be used with these transformers. There are several ferrite cores, such as the #61 mix, that look promising but were not used in these tests.

The process and experiments were mainly applied only to small signals (low power) and did not explore advanced problems associated with high power levels such as core heating and high magnetic fields in the cores. However, some preliminary heat tests were done with an FT114-43 transformer (Experiment #3). The core temperature was measured with a rather simple IR thermometer from Fluke Instruments and indicated a core temperature rise of 44° C when operated at a continuous power level of 14 W at 14 MHz.

My core calculations indicated that the temperature rise is expected to be 40° C under the same tests. The core was operated in free air with good convection cooling without a fan. The temperature rise in an actual situation depends on many things such as the mode of transmission (SSB, CW and RTTY), the duty cycle and the type of enclosure that is used for packaging the transformer as well as the ambient temperature. If you place the transformer in a sealed plastic box and expose the system to an ambient temperature of 50° C on a hot summer day, the power level will be severely limited. Since large cores heat up more slowly than small ones, the power level can be considerably higher than continuous levels for short periods of time.

Finally for high power, greater than 250 W, base station operation you might consider using an L-C antenna tuner that is capable of matching into 3 k Ω loads where size is not too important.

FURTHER STUDY USING TCA HOTLINKS

Further information is provided with TCA hotlinks which are easily accessed via the RAC website. For this information, please visit <http://www.rac.ca/tca>. Hotlinks make it unnecessary to type URL addresses into your computer and provide you with calculators and other support that demonstrates the ideas presented in the articles. The following hotlinks for this article are available on the RAC website.

TCA hotlink 1: ON9CVD – <http://sharon.esrac.ele.tue.nl/~on9cvd/E-Ferriet.html>

TCA hotlink 2: The Ideal Transformer – <http://en.wikipedia.org/wiki/Transformer>

TCA hotlink 3: The Autotransformer – http://nptel.iitm.ac.in/courses/IIT-MADRAS/Electrical_Machines_1/pdfs/1_11.pdf

TCA hotlink 4: Fair-Rite Ferrite Cores – <http://www.fair-rite.com/newfair/index.htm>

TCA hotlink 5: Micrometals Powdered Iron Cores – the URL is too long to include here; visit <https://www.rac.ca/tca/tcahotlinks.htm>

TCA hotlink 6: Kits and Parts, toroid core supplier – <http://www.kitsandparts.com/>

TCA hotlink 7: PD7MAA website – <http://pa-11019.blogspot.ca/>

ACKNOWLEDGEMENTS

The author wishes to thank Bryan, VE3ZRK, for his assistance with the fabrication and measurements of the transformers. The author also wishes to thank Bob, ON9CVD and John, PD7MAA, for their discussions about high turns ratio HF transformers.

– Until later, David, VE3KL

RAC PRESIDENT'S MESSAGE – continued from page 7

6) To maintain a tangible presence in the Amateur Radio community in the form of a corporate office and address.

7) To maintain a "Field Organization" for public service.

At our planning meeting in February 2013 we determined the following objectives over the period 2013 to 2018:

- Continue growth of Amateur Radio and RAC
- Increase public support for Amateur Radio
- Increase political support for Amateur Radio
- Increase RAC influence on regulatory agencies (local, provincial, national and international)

For 2013-2014 we determined to:

- Develop publication and communication supports to clubs, Amateurs and the public to grow new Amateurs, increase RAC membership and influence public and political opinion
- End "hidden subsidies" by volunteers; RAC to stand as an organization
- Increase RAC resource base (grow resources)
- Be prepared to pay for mission critical functions (increased accountability and outcomes)

You have seen the above text before as we have used TCA and The RAC Report to get the message out, but repetition is useful in spreading the word. We look forward to travelling down the road and to have more and more hams join us.

This year has been a tough one weather wise; perhaps making up for the lack of winter two years ago. Let's hope that the summer will be good to us.

See you (or hear you) in BC in July!

Geoff Bawden, VE4BAW
RAC President and Chair



For the RAC Store visit:
http://www.cafepress.ca/rac_radio

Industry Canada's Antenna Tower Siting Policy

On February 5, Industry Canada's Minister made an announcement bearing the title "Harper Government Making Changes to Cell Tower Placement Rules". Industry Canada's current governing document is CPC-2-0-03. A notice has been posted stating that changes to the document will be made subsequent to yesterday's announcement. Rest assured RAC will convey to IC in the strongest of terms that no changes be made that would negatively affect the Amateur Radio antenna installations currently in place. RAC does not believe this policy change announcement was generated by problems caused by the Amateur Radio community. RAC further believes the current 15m height has worked well for several years. Amateur Radio antenna structures, like those used to receive off the air television or listen to short wave broadcasts, are different in many ways from cellphone towers.

RAC has been instrumental in a number of communities in establishing public consultation protocols that recognize the differences between commercial cell towers and personal use or Amateur Radio antennas and so to permit Amateur Radio antenna structures in excess of 15m without consultation. RAC has always been willing to work with Industry Canada in consultations that take into account the needs of the general community and Amateur Radio operators. We will provide regular updates on this announcement going forward as the situation warrants.

Visit <https://www.rac.ca/fr/news/bulletins/2014/2/> for more information.

Glenn MacDonell, VE3XRA
RAC Vice-President Regulatory Affairs

Politique d'Industrie Canada sur l'emplacement des tours d'antenne

Le 5 février, le ministre d'Industrie Canada faisait une annonce sous le titre "Le gouvernement Harper modifie les règles sur l'emplacement des pylônes de téléphonie cellulaire". Le document actuel d'Industrie Canada porte le numéro CPC-2-0-03. Un avis a été émis stipulant que des changements au document seront faits suite à l'annonce d'hier. Soyez assuré que RAC fera savoir à IC, fermement, en des termes non équivoques, qu'aucun changement ne devra être fait de manière à affecter négativement les installations d'antennes radioamateurs actuellement en place. RAC ne croit pas que cette annonce de changement de politique a été générée par des problèmes causés par la communauté radioamateur. RAC croit de plus que la hauteur actuelle de 15 mètres a toujours bien fonctionné depuis plusieurs années. Les structures d'antennes radioamateurs, comme celles utilisées pour recevoir le signal télévision ou écouter des émissions ondes courtes sont différentes de plusieurs façons des pylônes de téléphonie.

RAC a été utilisé dans plusieurs localités pour établir des protocoles de consultation publique à l'effet de reconnaître la différence entre des tours d'antennes commerciales de téléphonie et des antennes radioamateurs à usage personnel, et ainsi de permettre des structures d'antenne radioamateur excédant 15 mètres sans consultation. RAC a toujours été d'accord pour travailler avec Industrie Canada en matière de consultations qui tiennent compte des besoins de la communauté en général et des opérateurs radioamateurs. Nous ferons des mises à jour régulièrement à propos de cette annonce, au fur et à mesure que la situation le justifiera.

Visitez <https://www.rac.ca/fr/news/bulletins/2014/2/> pour plus d'informations.

Glenn MacDonell, VE3XRA
Vice-président de RAC aux affaires réglementaires
(Traduction par Claude Lalande VE2LCF)

MALCOLM REDDING, VE1IZ: IN MEMORIAM

Submitted by
Len Morgan, VE9MY

Malcolm Redding, VE1IZ, became a Silent Key after 77 years as an Amateur Radio operator who was well known in New Brunswick and throughout the Maritime provinces.

He graduated from Saint John High School in 1936 and was licensed at age 16 when he and a group of local Radio Amateurs met

to form the Loyalist City Amateur Radio Club in February 1937. At the formation meeting, it was recorded that "the formation of such a club was paramount to the advancement and protection of Radio Amateur activities in this district, and that such a club should be formed without delay", just as Amateur Radio organizations and clubs are still doing today.

Malcolm attended the University of New Brunswick and obtained his Bachelor of Science degree in Electrical Engineering in 1941. His final-year thesis was titled "The Principles of Protective Relaying in Electric Power Systems".

In 1942 he enlisted in the RCAF and was posted to remote stations in Labrador where he worked with the then new technology of radar. Later, he was transferred to Bournemouth, England, where he remained until January 1946. He continued with the RCAF Reserve until 1957, leaving with the rank of Flight Lieutenant.

The description of Malcolm's first Radio Amateur station likely won't make a lot of sense to any but the old-timers still around today. His transmitter was a TNT245 with a whopping 7 watts to the output tube plate, later modified it to get to 7-1/4 and eventually 30 watts. An apparently big advancement was his 224-227 tube detector/oscillator combination, and eventually his war surplus Stewart Warner R5015 receiver. The Radio Amateurs of that era didn't call up "xyz dealer" to order a new top-of-the-line rig. They built, modified, experimented and improved until it was the best it could be.

Malcolm was very involved with the LCARC club, in which he held all executive positions, chaired many committees, and was very involved with emergency communications and local Civil Defence activities. He organized Field Day operations and several large conventions with Radio Amateurs attending from all over the Maritimes, Quebec, Ontario and the Northeast USA.

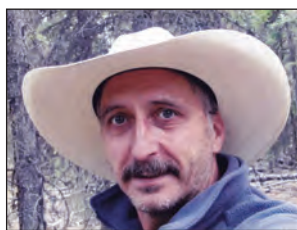
For many years, he was chairman of the club's Technical and Interference committee and very involved with promoting and teaching others to obtain an Radio Amateur licence. Malcolm was instrumental in obtaining funding for Saint John's first commercial-grade 2-metre repeater to support public service activities and benefit communication with hand-held radios.

Malcolm retired from NBTel in 1982 as Senior Engineer who had been involved with developing radio-communication links, introducing new telephone switching technologies, and managing one of the first large-scale applications of fibre optics to distribute signals around the New Brunswick telecommunications network.

Malcolm was renowned for his technical capabilities, his enthusiastic enjoyment of the many Amateur Radio communication modes, and his enduring concern for his Loyalist City Amateur Radio Club.



RANDOM THOUGHTS...



Dirk Moraal, VY1NM
Box 75
Tagish, YT Y0B 1T0

DX OR SX?

It's funny how a person's definitions are modified by accepted customs. Take DX.

We don't consider contacts made within Canada or between Canada and the rest of North America to be DX, even though some of these contacts exceed 5,000 kilometres. That is quite a distance.

Gerry, VA3AAG, once observed that the distance from his QTH to the Yukon was about the same as from his QTH to Europe.

Fine if you have a Big Gun antenna and an Amplifier under the bench. But what about a little pop gun rig (such as mine) running three watts from a Yaesu FT-817. To us everybody else is DX. Moreover, everybody else is rare DX.

It was strange to me that a QSO from here to VE5LBD in Saskatchewan on 0.5 watts (or less taking into consideration the transmission line losses) can't be considered DX (though the glory of achievement remains).

An older RAC Study Guide defines DX variously as: Long Distance or Distance; a foreign station; or a foreign station with limited command of English; or, any "DX" or distant stations, and mentions that any other country (outside North America) will probably consider us DX and so we could respond to their call.

An Amateur in Niagara Falls, Ontario, can't count North Tonawanda, New York (34 kilometres away) as a foreign country no matter what Foreign Affairs says.

But a ham visiting say, San Diego, California, by these guidelines could conceivably stretch the point and claim DX for a station in Tijuana, Mexico, 24 kilometres away. (I suppose here is where "a foreign station with limited command of English" might apply). To take it to another extreme, would an Earth-Moon-Earth QSO between two Canadian stations (a return path of somewhere around 800,000 kilometres) be considered DX or not DX? I'm just sayin'.

I have only had a few real DX SSB contacts on QRP (my own criteria spells that as less than five watts), notably Vlad, UAØLD, in Vladivostok, Russia and several stations in South America; but the farthest to date – José, XQ7HL, in Chaitén, Chile, 12,733 Great Circle kilometres away – was not completed because he said, he was old and deaf and while he could hear my puny signal, it was not possible for him to make out my call sign, though he recognized the country name. He said he was on the air celebrating himself for "over 50 years on radio". I hope I can transmit that long.

So one evening my mind strayed and I discovered SX. And I hope the idea will catch on some day.

SX would be when you make a contact that, by distance measured, is a heck of a long way away considering your particular station capabilities, but for geographical reasons does not qualify as DX.

So a QRP station from the Yukon contacting a QRP station in Nova Scotia (thank you VE1MEA) would have the same bragging rights as if it were a DX QSO. Maybe even be considered DX.

And who knows where it will end. There could be a new category of awards or national contests if enough Amateurs become entranced with this idea. It could be an exclusive Canadian thing or other entities might want to participate in the Canadian SX awards. This could be very healthy for Amateur Radio all across the board.

Of course most of you have already recognized the old Miles per Watt game here, with some refinements. I have not heard of a Canadian Miles per Watt award system, but if there is, please let me know. There are very few bright new ideas that were not thought up in the past, but some may be worth reviving.

Every day is Field Day with QRP and you know you really are QRP when the mosquitoes carry you AND your radio away.



UN MESSAGE DU PRÉSIDENT

– suite de la page 7

7) Maintenir une organisation extérieure sur le terrain à l'intention de la population.

À notre réunion de planification de février 2013 nous étions convenus des objectifs suivants pour la période de 2013 à 2018:

- Poursuivre la croissance du radioamateurisme et de RAC
- Accroître le soutien du public envers la radio amateur
- Accroître le soutien de la classe publique envers la radio amateur
- Accroître l'influence de RAC auprès des agences chargées des règlements (locales, provinciales, fédérales et internationales)

Pour 2013-2014 nous avons décidé ce qui suit:

- Développer un soutien visant les publications et les communications des clubs, amateurs et le public pour recruter de nouveaux amateurs, augmenter le nombre de membres de RAC et influencer l'opinion publique et politique.
- En finir avec les « subsides cachés » venant de nos bénévoles ; RAC doit agir comme une organisation
- Élargir la base des ressources de RAC (accroître les ressources)
- Être prêt à payer pour les fonctions et missions critiques (accroître la responsabilité et les résultats)

Vous avez probablement déjà lu le texte ci-dessus puisqu'il a été rendu public dans TCA et RAC en bref, mais la répétition est utile si on veut répandre un message. Nous espérons que « chemin faisant » nous rencontrerons de plus en plus d'amateurs qui voudront se joindre à nous.

Cette année fut difficile au niveau de la température; peut-être pour compenser l'hiver facile d'il y a deux ans. Espérons que l'été nous sera agréable.

Au plaisir de vous voir (ou vous entendre) en C.-B. en juillet!

Geoff Bawden, VE4BAW – RAC
Président-directeur général

– Traduction par Claude Lalande, VE2LCF



VE7RC Copper Island Activation

Ron Essex, VE7RLE

At the April meeting of the Shuswap Amateur Radio Club, club President Robin Hickman, VE7HMN, first broached the idea of a Copper Island Activation in September.

The club then made formal motion to request permission from Parks Canada for such an undertaking. Robin navigated the permission process and was the driving force leading to the successful activation.

On September 21 and 22, 2013, from 1700Z to 1700Z, the Shuswap Amateur Radio Club activated Copper Island, the only island on Shuswap Lake, a key recreational water body in our province covering 120 square miles with a maximum depth of 530 feet.

As Copper Island is located in Shuswap Lake Provincial Park, special permission was sought and granted from British Columbia Parks as detailed in Letter of Permission #026-2013.

Essentially, all radio operations were made from two stations located on a rented pontoon boat, whereas our dipole antennas for 20, 40 and 80 metres were located on the rocky shores of the island itself.

In addition, an 8 x 10 foot deluxe wall tent was erected on a temporary wooden foundation to serve primarily as a refreshment area and equipment shelter.

Our site of operations on the southeast corner of the island was selected on September 8, and the formal island setup began on Friday, September 20.

Contacts totalled 102 as follows:

80m: 8; 40m: 78; and 20m: 16.

Countries worked in addition to Canada and the US were Slovenia, Mexico, Italy, and the Netherlands.



Operators logging at least one contact included: VE7HMN, VE7RLE, VE7RZZ, VE7OHR, VE7BPH, VE7LOG, VA7HDY, VE7SHG and Dallas Rooy, the young grandson of VE7OHR.

No less worthy was the help of VA7DTX, VA7TSG, VE7ODR and VA7DBC with setup, antenna work and assistance with the boats.

The weather cooperated for the most part with mixed sun and cloud, but strong winds and five-foot swells breaking onto the beach overnight on Saturday required extensive bailing of a 19-foot pleasure craft over several hours.

Everyone who participated in this our first-time-ever activation is keen to look nearby for prospective islands to activate in the coming years.



The photos show the island, the pontoon boat from which we operated, the small rocky beach, our temporary tent, and our scramble on the rocks to set up our dipoles.

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Exclusive RAC membership



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 Devon Racicot, VE5DWR
 Marty Raine, VE1AE
 Norm Rashleigh, VE3LC
 Bryan Rawlings, VE3QN
 Steve Regan, VA3MGY
 Gilles Renucci, VE2TZT
 Earl Richardet, VE7QJ
 Dennis G Ritchie, VE3DXZ
 Jeff Robbins, VE3JTR
 Ed Roberts, VE3KSW
 Bernie Roche, VE3OTR
 Peter Rogers, VE3ETR
 Bruce Roney, VE3BER
 Donald Rowed, VE3KII
 Gerry Saelens, VE7DCW
 Edward Samborski, VE3TAS
 Patrick Sandi, VE7SDI
 Brian Sayer, VA6BCS
 Bill Scholey, VE7QC
 Joseph T Scott, VE3ADB
 John D Scott, VE1JS
 David Scott, VE3ZZU
 Ellis Seddon, VE4AJO
 Ian Seddon, VE3HUT
 Bill Sheldrick, VE6ILE
 Kieran Shepherd, VA3KS

Robert A Shkuratoff, VA7DIV
 Chad Shoaf, VA6TT
 George B Simpson, VE6HX
 Gary W Skett, VE7AS
 William E W Skuta, VA3WEW
 Robert A Smith, VE3RSG
 Ian Snow, VA3QT
 Dave Snyder, VE4XN
 John Sobkowicz, VA6GEO
 Margaret Somerleigh, VE3OWL
 Mark Spencer, VE7AFZ
 Harry H Splett, VE3HHS
 Noel T St-Amand, VA3TS
 Mike Stafford, VE6MEX
 Alan Steele, VA3STL
 Rob Steenweg, VE1CHW
 Dean Stennes, VE7NEW
 Al Stephens, VE3NXP
 Jeff Stewart, VA3WXM
 Jack Summers, VA3XR
 Hiroshi Takahashi, VA7LET
 Ann Tekatch, VA3NOE
 Yori Tsuji, VE4ACX
 Ian Graham Turnbull, VE7TGI
 Al Tyson, VE3EXE
 WL Underwood, VE1WLU
 Bill Unger, VE3XT
 Henry Urbanowicz, VE3OEO
 Ronald Vadeboncoeur, VE3REV
 A E Vaillancourt, VE3DPZ
 Hudson C Vallieres, VE9HCV
 Todd Van Norman, VE7GBO
 Bernie Van Tighem, VE7BVT
 Robert Vanderminnen, VA3RMV
 Marinus Vanderminnen, VA6OPA
 Sanjay Vig, VA2OP
 Maurice-André Vigneault, VE3VIG
 Ron Vollick, VE3GGX
 Andrew Webb, VE6EN
 James A Webb, VE3WA
 Albert Morris Webber, VE4AMW
 Joel Weder, VE6EI
 Andrew C Wells, VE3WEL
 Randy Mark Westby, VE6DFC
 Garth Wetherall, VE3YC
 Peter Wetton, VA3PRW
 John E White, VA7JW
 Kyle White, VE9KTW
 Barry L Wielgoz, VE5HA
 Chris K Wiesner, VA3SM
 Brice Wightman, VE3EDR
 James A Wilkins, VE7UVL
 Brian Williams, VE3KNE
 Ken Williams, VE9KW
 Wayne F Willis, VE5FWF
 Harold H Wirth, VA3HHW
 John Wiseman, VE7BVS
 Timothy Wood, VA7TIW
 K Scott Wood, VE1QD
 Allen Wootton, VE7BQO
 James E Wyse, VO1CPZ

NEW RAC MEMBERS NOUVEAUX MEMBRES RAC

Carl O Abrams, VA3JGJ
 John Allison
 Peter J Barry, VA6PJB
 Terry Bennett, VA3TUC
 Shaun Betchuk, VE6ADF
 Michael Bianco, VA2WBM
 Anand Biehl, VE3BLU

Markus Biehl, VA3MQS
 Henry Lionel Blais, VE3HJL
 Paul Bold, VE3OMP
 Marc-Andre Boucher, VE2MBT
 Mitchell Brown, VE6MIT
 James William Burrett, VE3BZR
 Michael David Butler, VA3MDB
 Grace Byrne, VE7IGB
 Richard Aurel Chabot, VA3AGX
 Don Chamberlain, VE3OOM
 Stephen Cook
 Ioan Cosma, VA7CSI
 Kevin Shaun Crawford, VA7AZK
 Bahram Dabiri, VA7BDK
 Noriko Date, VA3QND
 Todd Demone, VE3LMM
 Jean-Marc Desrochers, VE3ORL
 Maria V Devesa, VA7MVD
 Sandy L Dong, VE6SLD
 Gary Doolan, VE7LKG
 Arthur Raymond Dougherty, VE5FDT
 Michael W Drake, VA3BKQ
 Enrico Fala, VA3ENF
 Stuart Michael Fedak, VE3SMF
 Pierre F Fogal, VE3KTB
 Brian Gage, VA7BDG
 Paul Gendron, VE2PGN
 Christopher Gibson, VE6CWG
 Bill Gibson, VE3TGI
 Jeffrey Giesbrecht, VE7GIE
 Bernard Giguère, VE2ILT
 James Malcolm Gilker, VE9JMG
 Andre R Goguen, VE9ARG
 Elizabeth Golas, VA3ELA
 Barry Golfetto, VA3HUH
 Andrew William Graham, VA3AWG
 Austin Hallett, VA7AHH
 Summer Hartzfeld, VE5SDH
 Tommy Harvey, VA2WET
 Bernard Head, VA6BH
 William Hebb, VE1HEB
 Michel Helou, VE3LBH
 Anthony Hewitt, VE7WWO
 Mirza Shakir Hossain, VA3SNA
 Edward William Hughes, VE3VV
 Robert Hughes, VA6RDH
 Jason Humphrey, VE1PLF
 Laurentiu Iacob, VA7SIL
 Rosaire Jacques, VE2GHZ
 Patrick Jacques, VE7PDJ
 Roy E Jamison, VA7REJ
 William Janushewski
 Bryan Jones, VE2TXH
 Paul Marshall Jones, VA7MJ
 Alexander Robin Keller, VE3ZSH
 Charles Worrall Kelly Jr, VE1MDO
 Youngwook Kim, VE6YWK
 Martin L Kirouac, VE2MKR
 Kelly Klatt, VA6KRK
 Lawrence Winston Kyle, VE4SS
 Michel Stéphane Labrèche, VE2SLM
 Bernard Lacourse, VE2RJK
 David Lambert, VE3KKG
 Michael James Lamont, VA7MLZ
 Paul Lancaster, VE7PEV
 Ralph Ashton Lapp, VE7ORL
 Robert Larivee, VE2KTF
 Jesse Lawrence, VE7LGX
 Robert Cameron Leroy, VE3MGQ
 Pierre - Louis Levesque, VA2MNL
 Perry Lawrence Lindberg, VE6NX

Bernardo P Lingasin, VE4PBL
 Richard Lyon, VE6RBL
 Sydney G MacDonald, VY2MAC
 Nebu John Mathai, VA3THD
 Clayton Matyjanka, VE5CTM
 Cam Mayor, VA4CAM
 James E McComiskey, VE6VEM
 Robert McKinnon, VA6RJM
 Douglas Miles Mobley, VE7CZF
 Blair Michael Morosnick, VE3ZBM
 Robert James Morrison, VA7CNB
 James Walter Mouck, VE3NWN
 Kip Muller, VA3KXM
 Gary Murphy, VA1GGM
 Dean Nobes, VA2IPN
 Michael O'Brien, VA3MTX
 Ann Odgers, VA3PAO
 Dave Parker, VA7AEL
 Albert S Parsons, VE6RFM
 Ken Patenaude, VE7NOW
 David Victor Pearce, VA3DVP
 Clinton Peebles, VE7RNL
 Daniel Perreault, VE4DPR
 John Patrick Perrin, VE3GZ
 Al Peterson, VA7ALZ
 Robert G Peterson, VA7RGP
 Jeff E Pollock, VA7BAJ
 James Putnam, VE7JPI
 Rob Reid, VE7FU
 Jocelyn Richard, VA2AGZ
 August Rinz, VE7HXT
 Samuel Mark Ritchie, VA7IX
 Duncan Andre Robertson, VE3GNI
 Jason Rosinski, VA3EER
 Pierre Roy, VA2PRN
 Stephen Sharpe, VA3ATC
 Garland Sharratt
 Bill Sheldrick, VE6ILE
 Brian Short, VA7GTW
 Jonathan-David Simard, VE9JDS
 David A Simard, VE9MAR
 David C Sinclair, VA7DRS
 David Skelhon, VA7SZ
 Colin Slade, VA3YZZ
 Terry G Smith, VA3TMS
 Rob Smith, VA6RR
 David Snelson, VA3DSH
 Keith Snider, VE3LKQ
 Jamie Sproule, VE3JSO
 David M Starr, VE3LFA
 Shelia Stene, VA3SKS
 Brock Strahan
 John Brian Summers, VE3DUO
 Austin Sweezey, VA3SWY
 Edward J Szymanek, VE6EJS
 Gustave Treewater, VE7GTC
 Eric Tremblay, VA2ETZ
 Steven Tan Uy, VE7SUY
 John Charles Vanderloos
 Scott Verge, VE1SRV
 John Visser, VE3FDV
 Eric R Wadman, VE7MKW
 Thomas Russell Walter, VA3WTR
 Michael Watkins, VE7WV
 Douglas Watts, VA6DWN
 Andrew C Wells, VE3WEL
 Sukwan Widajat, VA3WID
 Ian Woodall, VE3CWN
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WHY "CQ" AND "SOS"?

As I get started on this issue of the column, I have an idea it is going to be largely about Morse Code, and CW operation and habits.

The sensible way to do what I have to do – have been doing in TCA for 20+ years – would be to put on record anything that may be of interest to you as and when it crops up. Then all I would have to do when the message comes from the editor with the words "...and a deadline" would be to collect it together and send it.

But, as with most writers, I tend to put off thinking about QUA until the deadline approaches, and I cover whatever is in my mind at that eleventh hour. So it is at this moment. Fresh in my head is an ongoing discussion on the FOC forum about the origin of "CQ".

N5TP brought to the attention of the group, K5RW's website – <http://telegraph-office.com/pages/arc2-2.html> – which has pages and pages of research into the history of the development and use, mainly in the maritime service, of the International Morse Code.

QUA – A TOPICAL DIGEST

Unfortunately, much of the subsequent discussion centred around the possibility that "CQ" may have arisen from the first two syllables of the French word "sécurité" ("see-cue", although the French would pronounce this "say-coo") and also of the possibility that it means "seek you".

Both these suggestions seem to me to be far-fetched. The prosign "CQ" has nothing to do with security, safety or distress. If there had been any safety aspect inherent in "CQ", why would the "D" have been added to form the first distress signal, "CQD"?

Similarly, the idea that "SOS" may stand for "Save Our Souls" is rather ridiculous. The distress signal is not "SOS" at all; it is the code signal ... _ _ _ _ _ ("SOS barred"), almost for sure chosen because it is easily recognized and not likely to be mistaken for anything else.

I have never seen any credible suggestion why "CQ" was chosen to indicate "Calling anyone that would like to respond" ("QST" was chosen to indicate "Notice to all stations, with no invitation for a response" – this was just the next available group of letters in an alphabetical sequence. "QUA" for "Here is the news" comes soon after). Thank goodness no one has suggested phrases using the initial letters "QST" and "QUA".

Another example is ... _ _ _ compared with ... _ _ _

The former, not used much these days by Radio Amateurs, means "end of work" ("vic ack" as I remember from my days in the RAF), not to be confused with "silent key".

I don't remember that we had any way of voicing ... _ _ _ ("VE barred"), that meant "Plain language follows", to distinguish from ... _ _ _ meaning "numbers to follow". Those prosigns were used in signals school, but I don't remember using them in operational work. Maybe I should bring that up on the RAFARS forum.

There was also, somewhere or other, a discussion about the use of "KN", said to mean "No one else please". Many operators have forgotten what "KN" meant, and it seems to me that on the key and on the mike, "only" is much more likely to be understood. I believe "KN" was an Amateur Radio invention.

HISTORY OF THE CODE

K5RW's website, cited earlier, has a valuable collection of facts relating to Morse Code as used in the Maritime Service, nicely sorted out for your information and education.

One thing TCA lacks is a "CW column", don't you think?

My favourite column, by far, is "Morseman" by Gary Bold, ZL1AN, in the New Zealand magazine *Break-In*. Gary covers many other topics, technical and historical, but there is always something there to interest the CW operator.

SAQ BROADCAST

Every year, around Christmas time, a VLF broadcast goes out from the historic Alexanderson alternator at Grimeton, Sweden, and usually someone makes a recording of it and puts it on the web. This time, from N1EA, comes the links to the covering story:

http://www.grimeton.info/grimeton_radio_station.html

There are some pictures at:

<http://www.flickr.com/photos/cablefreak/3216881055/>

And a recording at:

<http://archive.org/details/GrimetonRadioSaq201306300900UtcBroadcast>

This was the beginning of CW (continuous wave) as a medium for International Morse Code for radio, replacing the harsh hiss of spark with the tonal music we enjoy today.

"THUNDERSTRUCK"

Gary, ZL1AN, has been reading what he describes as an astonishing book, "Thunderstruck", by Erik Larson, the life stories of Marconi, first developer of "wireless" communication, and Hawley Crippen, deeply involved in one of the first highly publicized early uses of it.

There are details of Marconi's experiments and extracts from his letters – including an instruction during the famous transatlantic tests for his transmitter operators to send ten-minute "volleys" of 250 S's spaced by 5-minute intervals "to allow the transmitter to recover", and "The key was like a lever on a water pump – it required strength and stamina to operate, not a standard telegraph key."

At one time he wrote, "my whole approach to wireless has been a mistake. Everyone followed me in building stations hundreds of times more powerful than would have been necessary had short waves been used."

Crippen enters the story in 1910, when he sailed on the *SS Montrose* with his mistress after murdering his wife and burying her in the cellar. Recognizing the couple, the captain alerted Scotland Yard using the spark wireless equipment recently installed. The arrest of the couple at sea, and the media publicity accorded the story are covered in detail.

With 44 pages of references and footnotes validating Larson's account, some readers found the book overwhelming in its detail, but for anyone seriously interested in the history of radio, this is a benefit. If you look for it in the library, the Dewey reference is 364.1523.

BRITISH STANDARD 89

"Morseman" is still hunting for an explanation of the designation F.G.X4 found on some WWII meters. G3JKY says:

"To the best of my memory the FG stands for First Grade and a meter like the one shown would probably have been specified by British Standard 89... A meter marked FGX4 would be specified as [accurate to] 8% of full scale, not impressive, but probably adequate for mass-production in wartime."

Anyone know where British Standard 89 may still be found?

THE NATIONAL HRO

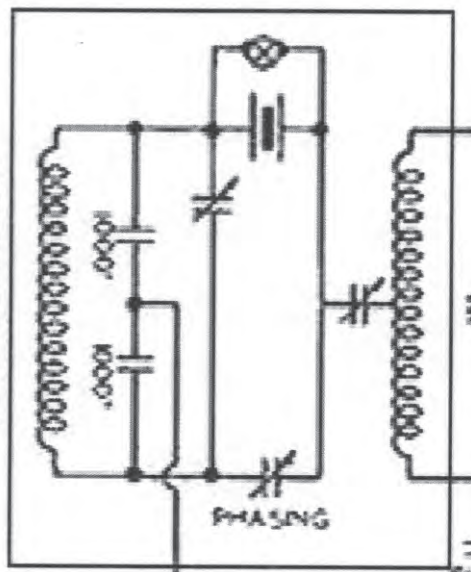
Discussing the WWII HRO receiver, "Morseman" says: "You can see how straightforward and 'classical' it is, except perhaps for the crystal filter, which blogs suggest only a few Hams used or managed to understand."

That is a very interesting reservation. When we had HROs on the Mobile Signals Unit I ran during WWII, the thing "my guys" most treasured was the "single-signal" crystal filter. Once it had been carefully set up, they sure knew how to use it to good effect. It made the beatnote asymmetrical; approaching zero beat from one direction the audio tone slid down in frequency to zero, but on the other side of zero it hardly existed. Under heavy QRM conditions, this was invaluable, and we had never come across anything like it.

To our sorrow, our HROs were replaced by AR88's, which had a symmetrical filter (besides being much bigger and heavier, important on our limited desk space). But it was nice to have the direct frequency readout when having to go quickly to a new frequency, rather than fuss with the calibration curves of the HRO.

I can't say I understood completely *how* the crystal phasing CW filter circuitry on the HRO worked, but I enjoyed using it. It was in the IF chain and looked like the image at the right.

It was popularized by Jim Lamb in the 1930s as part of his massive "Single-Signal Superheterodyne", and used a circuit from a 1922 article by Walter Cady in "Proceedings of the IRE", April 1922. It used a crystal widely sold by Bliley (price \$5.90), available for 465, 500 and 525 kHz, the popular intermediate frequencies in use for superhets. The following website has all the info:
<http://www.bliley.net/XTAL/docs/misc/SSF/SSF.html>



If you are not fully aware of the history of the HRO, there is a wealth of information on the web, and it is fascinating, as this was truly a breakthrough in receiver design. N4TRB wrote an article on the historical perspective of the HRO in the January 2011 issue of QST. Many famous names in Amateur Radio are a part of this history.



The International Ham Fest 50th Anniversary

Richard Holder, VE4QK

The International Ham Fest celebrated its 50th anniversary from July 12 to 14, 2013 at the International Peace Garden. The site is located on the United States and Canadian border about 150 kilometres south of Brandon, Manitoba.



The Ham Fest had its beginnings when some Canadian and US Amateurs, who ragchewed on 75 Metre CW, got together at the Peace Garden for a picnic in August 1964. Participants were: Bob Withey, WA0HUD, of Willow City, North Dakota; Barry Riley, VE4BE, of Brandon, Manitoba; Harold Helten, WA0IOB, of Devils Lake, North Dakota; Bruce Christie, VE4DO, of Glenboro, Manitoba; and Roy Willoughby, WA0CHR, of Ruso, North Dakota.

The attendance increased to close to 400 in the early 1990s but it has since decreased. About 150 attended the 50th edition this year. Hams attend mainly from Manitoba, Saskatchewan, North Dakota and Montana but there are some from much farther away. Since there is no accommodation at the Peace Garden it is mainly a camping event.

In the beginning the event alternated between the Canadian and US side of the Peace Garden, but when the Peace Garden closed the Canadian campground the event moved to the US side and uses the Historical Lodge and the Campground as the base for the event.

The official hamfest has been held on Friday, Saturday and Sunday, but many visitors have showed up on the Sunday before the official date. This was when the best part of the international camaraderie took place. Each afternoon there was a Happy Hour, which was started by John, W0OSP and Bonnie, WB0JGM, who sadly are now both Silent Keys.

This is a quilt made by Sandy Letzring, KB0OFI, and donated to the 50th Ham Fest. The lucky winner of the quilt was RAC Midwest Director Derek Hay, VE4HAY.



Starting with IHF 51 all activities will be taking place on Saturday. The major changes are that the Sunday Pancake breakfast will become a lunch at noon on Saturday and the Sunday morning General Assembly will be moved to Saturday afternoon.

Other hamfest activities are tailgate fleamarket, eyeball QSOs, Saturday Night dance, Rabbit Hunts, VE testing, and Ladies activities, including Bingo.

For more information see the Coming Events on page 64 or visit: <http://www.mts.net/~holderr/ihf.htm>

EASTER ISLAND: MY ONE AND ONLY DXPEDITION

George Hrischenko, VE3DGX

Since other Amateur Radio publications are wallowing in nostalgia, I felt emboldened to write about the GREATEST EVENT OF MY LIFE, my Expedition to Easter Island.

I had read both *Kon Tiki* and *Aku Aku*, by adventurer Thor Heyerdahl, and was thrilled by the adventures he and his crew experienced drifting across the Pacific ocean from Chile to Easter Island on a Balsam log raft built by native sailors to prove that the Pacific Islands were populated by natives from South America who took a chance and ended up on many of the Pacific islands.

I had been an Amateur for about 11 years – and had been a transmitter technician with the CBC for about the same time – when I heard a news item on the Max Ferguson program “Rawhide” regarding a Medical expedition going to Easter Island for the World Health Organization to study the native population and to determine if they would be affected by the impending construction of a large airfield for safety and tourism use.

The doctor selected to head up the expedition was a specialist in Montreal who I found out was treating the head of the CBC International Service, which at that time was a powerful and respected entity of the CBC to keep our armed forces, scattered all over the world, informed and in touch with their native land. I convinced the leader, Dr. Skoryna, that there was no commercial communication link to the outside world from Easter Island and I told him that I could provide it on an hourly basis for him. He got sold on the idea and since one of his patients happened to be the head of the CBC International Service, a quick transfer of me from the domestic to the International Service was arranged.

My dear wife, Cathy Hrischenko, VE3GJH, gave me permission to abandon the family for the four winter months if we moved off the farm into Windsor, Ontario because a winter alone on the farm would be intolerable.

She even found a nice house in South Windsor where our five kids could walk to school and home for lunch so she would not have to drive them all over.

South Windsor had about one ham on every block who belonged to the Windsor Amateur Radio Club, as we did, so I quickly made arrangements for phone patches on a daily basis and also showed Cathy how to listen in on my home station



Left: George Hrischenko, VE3DGX, beside a half-buried Moai statue.

Below: The American Postmaster of the Canal Zone, a fellow Amateur, at my radio station on the HMCS Cape Scott.

come over and get her going. The auto was a '57 Plymouth station wagon (five kids) and if you ever had one you know what a lemon they were.

Generally, the trip to the Panama Canal was only broken by stops for food and beer which was radioed ahead by the ship's staff and only a short layover was needed.

(Cathy didn't get her ticket until 1965). So the big day finally arrived in November 1964 and I boarded a flight to Halifax and arrived and went directly to the Navy docks and boarded the *HMCS Cape Scott*.

The *HMCS Cape Scott* at that time was one of two factory ships that were capable of keeping the ships at sea in operating condition; the other one was stationed on the west coast. I made myself at home in my quarters and we set sail shortly after – right into what turned out to be the worst storm of the year a day or so later. My memory of that was sitting in the head, with the filthy water swirling back and forth trying to figure how many different directions I was moving in at the same time (I think it was seven or eight). After about two days of steaming south we cleared the storm and eventually docked in Bermuda.

What a stunningly beautiful place! Here it was late November and I had just come through a stomach-wrenching ride and to bask on a warm island with melodious bird calls and amiable people was a blessing. I should mention, when I was able to crawl into the spare radio room – which was located at the stern of the ship and equipped with a Racal receiver and a Collins transmitter – I was able to patch through to the wife after 9 am EST about three times a day so I was kept up on family matters and even spoke with the kids after school. Good thing too since Cathy was having automobile problems and I was able to get factory service to



The ship's radio officer was a helpful person except when the Captain had to send traffic from the main station topside – I had 30 seconds to get off the air.

Most of my days at sea were easy. I had no duties so I spent hours hamming or talking back home. When word got around that I would phone patch back to Dartmouth, at no charge, I soon had a list of users who were previously unable to do so while at sea, plus several members of METEI (Medical Expedition To Easter Island) who came from all over but mostly from Canada and the United States. As such I became a friend to many of the crew and METEI members and pretty well had the run of the ship, within reason. As a member of the expedition, I could dine at the Captain's table (white linen and sparkling cutlery) but I discovered the food was prepared in the same galley as for the officers and the able-bodied (AB) seamen so I usually ate with the non-com P-1's who were the skilled tradesmen.



Above: We were a short ship so other small ships went through the Panama Canal with us.

Middle: The "Crossing the Equator" ritual.

Right: Its aftermath. That's me after my session.

In addition, on our way to the Panama Canal I worked the Postmaster of the American zone which controlled the Panama Canal at that time and he proved to be an amiable and valuable help when we made port. As the Postmaster, he knew everybody in the Zone and outside in the Republic of Panama. Outside of the workers in the canal zone, the United States was not much liked due to their support of the dictator who was their President until a revolution later ousted him. The Postmaster was able to drive me out to the country where I cut many tall bamboo shoots as masts for antennas on Easter Island because Heyerdahl said the island was treeless.

As the *Cape Scott* set off through the canal – under the complete control of a pilot and small crew to handle the towlines etc – I experienced an episode that I will remember to my dying day. Picture this: we were in a low water lock and next to us was a US Destroyer in an upper lock going east. The METEI crew had the exclusive use of the helicopter landing pad on the fantail. There were more than a few women aboard – some of them young shapely single secretaries whose favourite pastime was working on a tan while enjoying a mixed drink in their bikinis!

There were a good number of males on the pad also but the main attraction was the bikinis – which were relatively new at the time – the drinks and the lounge chairs on what was obviously a Canadian warship complete with battleship grey paint, armaments here and there on various decks and nearly naked women (and guys) guzzling booze and beer on the fantail. Needless to say, the word

spread quickly on the American Destroyer and the near rail became so crowded with crew that I thought the Destroyer would capsize! To rub it in, I saluted them with my Moosehead and shouted "what navy did you guys join". As they slowly dropped and we raised, the wonderful show was lost to sight with the walls of the locks. I often wonder what kind of tales were told of this incident in the US navy.

After clearing the Panama Canal the *Cape Scott* headed southwest toward Easter Island. On our slow boat, time passed slowly and we entered the cold



Humbolt current. This was a surprise after basking in the heat of Panama. The navy people busied themselves building a ceremonial pool on the fantail for the Crossing the Equator ceremony.

During the Second World War very few in the navy crossed the Equator but we (luckily) had a few who had and they appeared in time for the ritual. Naval rank no longer applied, we obeyed the new regime for fear of who knows what. All us pollywogs (me too) got the soapy mop in the face and a simulated shave and a dump over backwards in the ice cold pool. Some people got special handling, especially the comely secretaries who mistakenly wore their bikinis for the ritual. I also noted that all the females, regardless of age, got hands-on, all-in-good-fun attention in front of the whole crew.

The ritual requires that you be dumped over backwards into the cold pool and, since the captain was obviously a "pollywog", he was treated the same or maybe a touch harder because I noticed he stormed off looking like a thundercloud. So much for rank. The rest of the trip to Easter Island continued on its plodding way; the *Cape Scott's* top speed was about 11 knots and to conserve fuel I'm sure we never pushed it.

Fortunately, I had my own radio room and was able to while away the time on the air, either back to home or just hamming. As I mentioned, if I interfered with the ship's schedule, I had 10 seconds to QRT. Finally we arrived at the island early one morning and I spent a great deal of time locating a close berth to the landing area, but not too close since if the ship hit any hidden reefs that would be a disaster. Nothing of the sort happened although during the off-loading process one of the AB seamen fell overboard and I jumped in too to keep him company. I don't know why I did it but I was pleasantly surprised to find, in my first swim in salt water, that it took no effort to keep afloat. I didn't think about sharks, I think the water was too shallow.

When we had circled the island earlier I looked out the porthole and saw to my wonderment seven or eight statues that had been erected on a rise of stones, staring out to sea. What a stunning greeting! The rest of the week was spent offloading the ATCO trailers that were to be our home for the next four months. In addition, the necessary equipment and personal items



were loaded onto a continuous stream of barges to the landing dock and the ship. Unfortunately, our personal luggage was stored in a warehouse that had formerly housed the island's largest export – sheep's wool – and with the wool long gone the fleas that lived there made their way into our personal luggage. How nice to find them when we opened our luggage later – not!

So we finally got everything off and set up the camp so the HMCS *Cape Scott* left us and made their way to Chile where they were supposed to meet with the Canadian officials and embark on a goodwill visit and other diplomatic functions possibly connected to the upcoming Expo 67 in Montreal. I was on the air by then and I could hear their key clicks every foot of the way across the salt water to Chile. Talk about conductivity!



The CBC group: the reason that I was there.

The camp was set up in a long oval loop with the trailers abutting each other (as shown in the QSL card) and each trailer was divided in half and housed two people. I was bunked in with our young cook who claimed to have no experience as a cook, but nonetheless poisoned nobody and kept the METEI crew fed. We had a continuously running diesel generator (except for maintenance) and two sources of potable water. One was a huge machine that may have operated on osmosis and the other was a greenhouse structure over a pool of seawater that evaporated the seawater which wafted up to the inside of the plastic cover, condensed there and trickled down to a gutter on each side and then into tanks for storage. It was almost as good as rainwater. It must have been, as an early riser I often saw some of the younger secretaries filching the water so they could wash their locks.

As a non-medical person I wasn't really part of the METEI group but I was called upon to help on demand. Officially, I was the sound tech for the CBC group. The other CBC rep was Bob Williams, the cameraman for the documentaries about the expedition. Two films were shot and edited and produced. They aired after we got back to Canada but when I tried to look then up on Google, I was able to find only a brief reference and no clips. The other chronicler was Carl Mydans from *Life magazine* who perpetually went around with four to six cameras hanging off him, shooting everything he could. *Life magazine* did a feature article on METEI and used several pages of Carl's work. There was another crew with the National Film Board doing a feature on METEI but I never saw their work.

The native people thought we were all wonderful people because we didn't give them any diseases. This was due to the fact the *Cape Scott* was so slow that by the time we left the Canal Zone and reached the island all our germs had exceeded the incubation period and were no longer transmittable.

The island was visited infrequently by cruise ships which were much faster and never failed to donate some diseases of which some of the frailer natives died. Thankfully, we were not responsible for any new sicknesses.

The camp soon settled into a daily routine of examinations and even chased down some shepherds who lived out in the hills. My day consisted of morning phone patches back to Canada (mostly Halifax for a few single sailors who elected to stay on the island and help the expedition), the USA for the various doctor/specialists, and also back to Scandinavia for the two Norwegian specialists on the expedition.

Since we arrived shortly before Christmas Day, we were invited to attend a Christmas service held in the small Catholic church served by five monks (who also owned a Jeep) and it was a treat to hear the well-known Christmas hymns and carols sung in the native language. Apparently, all native women are skilled singers in harmony and the few men lip-synced in the usual male manner. Our group could not sing the English words for fear of language clashing.

On weekdays, I would help out as needed and do a few remote shoots with my CBC partner for the CBC programs. Every morning I had to connect the Director, Dr. Skoryna, back to his Montreal HQ and then to his wife. Then Dr. Skoryna discovered a commercial /navy station on the island and preferred to use them when needed.

Weekends were not working days and they were spent on personal catch-up and exploring the island.



sequence. The METEI expedition achieved a 100 % coverage, even driving up to the hills to test a few shepherds who couldn't leave their flocks

The time came to say goodbye to the populace, who all came down to the wharf to wave goodbye. I was able to wring some more excitement out of the trip *but that's another story.*

My home station with some QSL cards.

ON EH ANTENNA SYSTEMS...

John (Jack) S. Belrose, VE2CV/VE3CVV

I am constantly, but not keeping up with the task, throwing out magazines and articles that I receive with reference to the fields of my interests, antennas and propagation and the history of wireless.

I have just re-read (re-scanned would be a better phrase) the **September/October 2012 issue of TCA**. In this issue:

1) David Conn, VE3KL, has published a column on electrically small transmitting loop antennas (pp. 16-19); and 2) Bob Eldridge, VE7BS, has commented (again) on the so-called EH antenna (pp. 22-23).

I have written a great deal about the antenna systems discussed. See for example: <http://www.qcwa70.org/truth%20and%20untruth.pdf>

Before I begin, the subject matter of this correspondence, I would like to tell you that I have corresponded for many years with Walter Maxwell, W2DU, who regrettably is now a Silent Key. Walter was very interested in impedance matching, power amplifier to antenna system (a conjugate match). The referenced article (above posting) contains (as well) a brief overview summary, for the record, based on some of my recent correspondence with Walter.

With reference to small loop antennas, look in particular at the **"Conclusions"** VE3KL wrote, in his referenced TCA article/column, about electrically small loop antennas. The topics he has said he did not discuss, are topics that I have particularly addressed in my two-part article published in the RSGB magazine *RadCom* (June/July 2004); Technical Feedback (June 2005).

In fact I am reminded frequently about these articles – I have a plaque to hang on the wall, awarded by the RSGB: **The Norman Keith Adams Prize**, 2005, for my writing the referenced articles.

VE7BS has raised again the question about the validity of the so-called **EH antenna system**. It is incredible that so much has been written about EH antennas, and about so-called **Crossed Field Antennas (CFA)**.

The EH antenna is a variant of the CFA. The CFA was conceived by Hatley and Kubbary in the mid-1980s – an antenna system that I (and my colleagues) have spent a great deal of time, constructing scaled down physical models, tuning and measuring field strengths radiated, and numerical modeling (by NEC) the structures we physically constructed.

We constructed the original version, a hollow metal vertical cylinder and a horizontal circular disc beneath the cylinder, elevated above and fed against an elevated wire grid ground plane; and the later version which incorporated a large flare structure into the upper cylinder.

The concept of Hatley and Kabbary begins with and continues (other foolishness leading to fraud) a wrong assumption. Their concept was that for the structures constructed, the cylinder generated only an E-field, and the disc only an H-field, and by adjusting the magnitude of the feeds in the right ratio, for a wave impedance of 377 ohms, they could achieve a match to the intrinsic impedance of free space.

To begin, this is wrong. The cylinder and disc are antenna elements, and so both of these structures generate an electromagnetic wave (not solely E and H fields). The CFA is difficult to tune, and adjusting the relative phase of the two voltage drives for quadrature feed (as the devisors wanted to do) results in additional difficulties, power oscillating between the cylinder and the disc. This results in addition loss, and in increased difficulty to tune.

The variant of the CFA, the EH antenna system, which is still of interest to some Radio Amateurs, results in some of the same foolish concepts – but one version numerically modeled by Belrose (Belrose, John S., "Electric-Magnetic Electrically Small Antennas", published in IEEE AP-S



Symposium Digest, Honolulu, Hawaii, June 10-15, 2007), a short vertical dipole centred on a small horizontal loop, has interesting features. Feeding the two elements in phase quadrature results in a radiation pattern (a cardioid radiation pattern) identical (in shape) with a commonly used antenna system by broadcasters (dipoles or monopoles spaced a quarter of a wavelength apart, fed in phase quadrature).

For readers interested in what I am saying, from a professional point of view, other than mine, I recommend reading the publication by R.C. Hansen, "Electrically Small, Superdirective and Superconducting Antennas", Wiley Interscience, 2006. This publication is a seminal reference.

In Conclusion, Open Google (or Safari) and type in: "Belrose on EH antennas"; or "Belrose on CFA antennas"; or by whoever; and you will see more postings than you probably wish to read.

*John (Jack) S. Belrose, VE2CV, VE3CVV
PhD Cantab, Alumni The Cavendish Laboratory (1953-1958)
Technical Editor of The Radio Club of America
Life Senior Member of the Institute of Electrical and Electronics Engineers (IEEE)*



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All Things Digital

Amateur Radio for the 21st Century 012

Robert C. Mazur, VA3ROM

E: va3rom@gmail.com

W: <http://my.tbaytel.net/va3rom>



THE WEB SOFTWARE DEFINED RADIO (WEBSDR)

Note: Portions of this article were published in "APRS Thunder Bay", Vol. 2, No. 8 (2010).

It's 4 am, and you've finished building/fixing your antenna/transceiver. If you're like I am, sleep is not an option. But every "normal" Amateur is asleep on your side of the world and you can't beg or buy a contact to the other side. So what to do? Well, in my case, I just "tune" my computer to one of the many World Wide Web software defined radio (SDR) servers and test away! See Figure 1 below.

The SDR is a hybrid mix of hardware (analog and digital circuitry) controlled by computer software. It receives radio signals and down-converts them into two discrete audio channels: the "I" or in-phase (0-phase shift) and the "Q" or quadrature-phase (90-degree phase shift). Mathematical manipulation of IQ channels produces both visual and audio

results on your computer, not of just one signal but of many simultaneous signals across tens of kilohertz! The SDR is usually simpler and less expensive than its analog equivalent (often smaller, "smarter", lighter and less power "hungry"). Only the software changes to add new features or to fix problems; the hardware remains the same.

Usually, only one person at a time can operate any device because we humans tend to think and work sequentially, and rarely juggle more than two or three tasks. Most computers loaf along (and could be doing something else), waiting for us to decide what to do. Many people realize, by using the Internet, they can build an open, resource-sharing, worldwide network of computers and ancillary hardware (an "extranet") performing a common task.

You can listen for extraterrestrial radio signals; track earth-unfriendly asteroids or hunt for comets; sift through millions of digital images or sounds; search through hundreds of years of geological data; study the effects of global climate change; upload/download various Amateur Radio data to/from global database systems (CWOP, APRS, WSPRnet, PSK and CW "skimmer" or reverse beacon networks) – all this and more – any time of the day or night!

More and more Amateurs run computer and radio equipment 24/7, connected to Amateur Radio and other extranets.

Sooner or later, someone would write computer software to combine the Internet with individual SDRs (Amateur and non-Amateur), and share these resources with the world. Dr. Pieter-Tjerk de Boer, PA3FWM, (Ph.D., Computer Science) created Linux-based server

A WebSDR is a Software-Defined Radio receiver connected to the internet, allowing many listeners to listen and tune it simultaneously. SDR technology makes it possible that all listeners tune independently, and thus listen to different signals, this is in contrast to the many classical receivers that are already available via the internet.

More background information is available [here](#). Questions and comments can be sent to [PA3FWM](#), the author of the WebSDR software and maintainer of this site; but please check the [frequently asked questions](#) first.

WebSDR servers can register themselves automatically on this site, leading to the below list of currently active WebSDR servers.

Currently there are 64 servers active, with 315 users and 98912 kHz of radio spectrum.

Filter band: Any and region: Any

Location and URL	Frequency range	Antenna
 WebSDR at the University of Twente, Enschede, NL http://websdr.uni.utwente.nl:8201 JO32KF; 137 users	0.000 - 29.160 MHz	Mini-Whip
 160/80/40 at University of Eindhoven NL, by Maxwell Foundation http://susanne.esrac.ele.tue.nl:3080/ JO21RL; 20 users	1.804 - 1.996 MHz	1m Active magnetic loop
	3.494 - 3.686 MHz	Horizontal 80m loop
	3.654 - 3.846 MHz	
	7.004 - 7.196 MHz	40m dipool
 160m, 60m, 80m and 40m SDR's from Nantwich in Cheshire http://hackgreensdr.org:8201/ IO83RA; 17 users	1.804 - 1.996 MHz	204 foot long double size G5RV
	3.600 - 3.792 MHz	
	5.237 - 5.428 MHz	
	7.022 - 7.214 MHz	
 Russia, Moscow region, Protvino: RV3DLX and RN3DKT http://m3dkt.ru/ KO84OU; 10 users	6.985 - 7.177 MHz	Double Bazooka N-S
	3.595 - 3.788 MHz	City-Windom CW80100
	14.004 - 14.196 MHz	CITY_Windom CW80100
 WebSDR in C3 Ordino - ANDORRA PRINCIPALITY - ARDAM Ham Radio Association - RX + pcs FuncubePro+ http://ardam-andorra.no-ip.org:8201/	7.008 - 7.200 MHz	
	3.556 - 3.748 MHz	Half wave Dipole
	14.043 - 14.235 MHz	

Figure 1: WebSDR Main Website Page (partial)

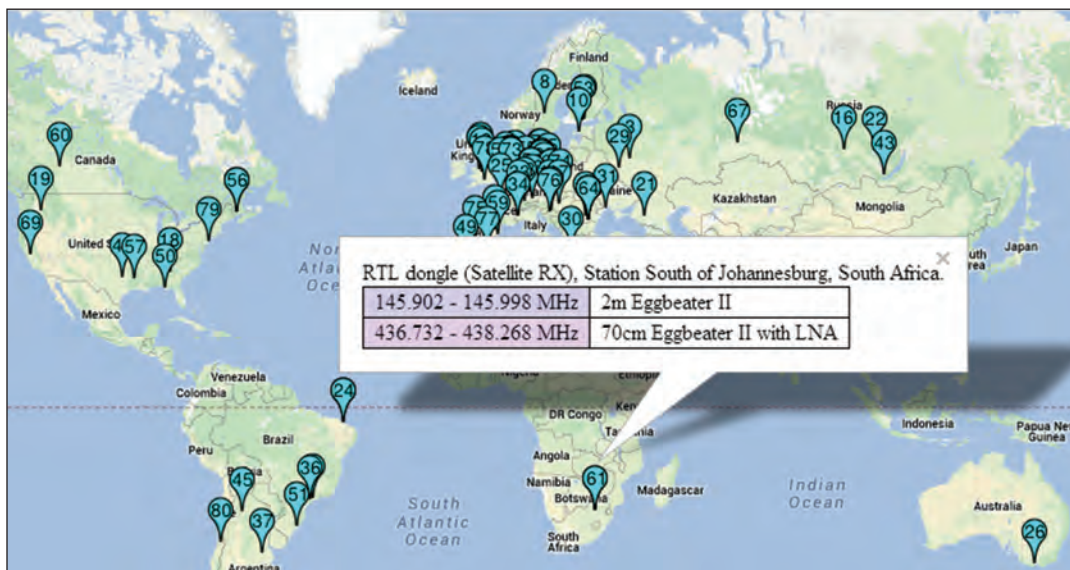


Figure 2: WebSDR Servers World Map

capabilities in a very small, low-current powered package, and can connect and share through one USB hub with one wide-band antenna system (or use separate antennas as required)!

Just two years ago (2012), it was discovered these European digital-TV/FM decoder USB receivers also produced IQ signals and were easily reprogrammed into wide-band SDR's. They are rapidly integrating themselves into all areas of radio spectrum use (Amateur and professional). See Figure 4 on the next page.

software and freely distributes it to others to connect their equipment to the WebSDR. Nearly 80 (and growing) server sites are available for receiving voice or data modes across the RF spectrum (see Figure 2 above).

Because everything is processed and controlled via software, multiple users can access any WebSDR server at the same time, only limited by the server's Internet bandwidth and computer processing power (about 40-50 users for typical home-based systems). However, universities (with active radio clubs) can afford more powerful computer systems and Internet bandwidths to easily handle hundreds of simultaneous users!

USING THE WEBSDR

Anyone can access any WebSDR server using a web browser with Java/JavaScript support, and more sites now support HTML5 (Hypertext Markup Language). Just point your browser to the main WebSDR website and go! The servers all use a standard and simple GUI ("goeey" or graphical user interface), along with the ubiquitous waterfall signal display.

Using your mouse or other interface (finger or stylus), you and everyone else share simultaneous (but separate) control of any WebSDR! It's very easy to adjust the signal bandwidth, mode, frequency, display settings, store frequencies, and log information, etc. Some sites are experimenting with mobile Android and iOS smart device support to accommodate their smaller screen size and operating features.

Figure 3A: University of Twente (The Netherlands) wide-band WebSDR

The University of Twente (Enschede, The Netherlands) provides a wide-band SDR server you can tune from DC to "infinity and beyond!" Now, I like listening to commercial AM broadcasts, and out of curiosity, tuned to the "BBC Radio 5" marker on 693 kHz (it has very interesting regional programs). See Figures 3A and 3B (below and on the next page). The BBC has dedicated Internet streaming audio servers (as do most broadcasters), but I would have never discovered this particular station (or the many others around it) without the WebSDR!

Servers with HTML5 support let you record and save audio which is very handy for recording/decoding digital signals after-the-fact. Some sites have only one SDR dedicated to a specific band and some have multiple receivers, and many are using the new USB RTL SDR dongles. These receivers have wide-band, multi-frequency

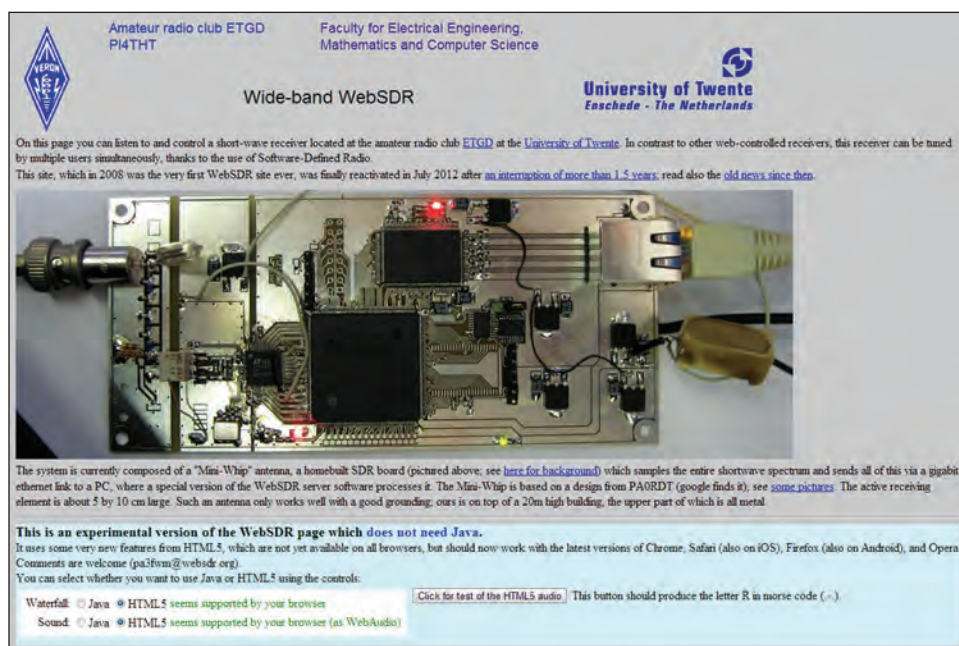
SOME APPLICATIONS

1) NO "REAL" RADIO OR ANTENNA

Perhaps you live in an antenna restricted area, or don't have a radio and want to know if there's something interesting "out there". With the WebSDR, there's no complicated setup, learning curve, neighbour interference problems, or extra cost involved. For many, it may be the only way to enjoy the radio hobby. You aren't restricted to voice signals because you can also use free programs with an audio patch cable to loopback the soundcard audio to decode digital modes. See Figures 5 and 6 on the next page.

2) TESTS AND EXPERIMENTS

Testing transceivers and antennas is another way to use the WebSDR because it lets you hear and see your signal as received at the



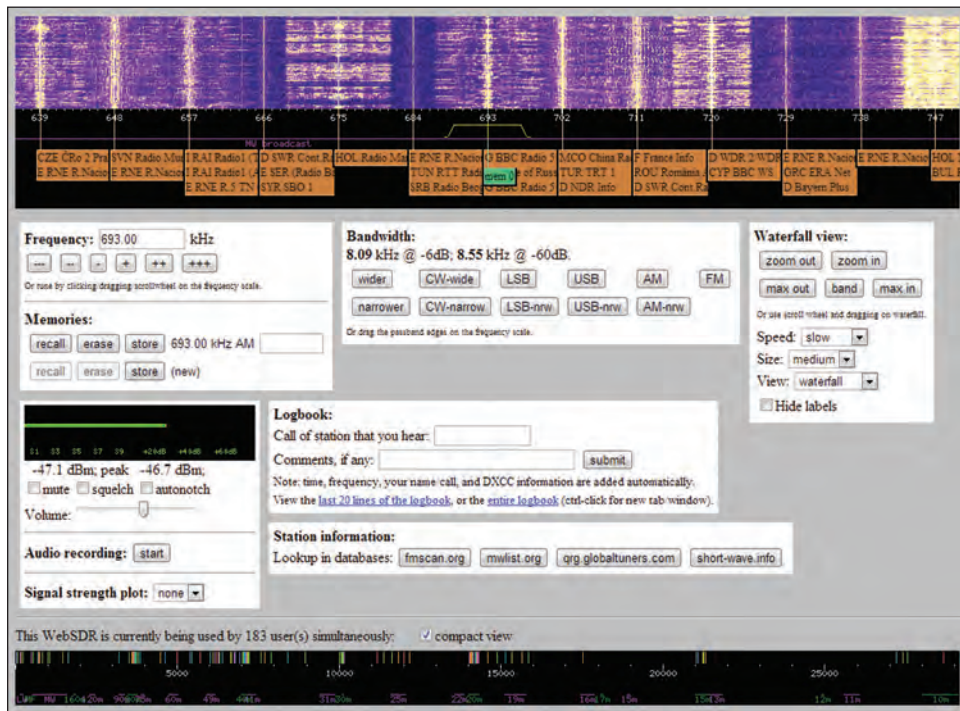


Figure 3B: University of Twente (The Netherlands) wide-band WebSDR

remote site, and also tell you if a band is open to a specific part of the world even if it appears “dead”. Or find out how low in power you can go and still see/hear your signal.

If you enjoy hunting for aurora or meteor scatter signals, doing astronomical research, decoding satellite telemetry, or listening to satellite voice contacts, then the WebSDR is an invaluable tool, especially if you (or your group) have a specific interest but lack the equipment or finances.

3) ARRL/VOA RADIOGRAM DIGITAL BROADCASTS

You can tune to the regular ARRL (W1AW) or VOA Radiogram digital broadcasts and use the free Fldigi software to decode these transmissions. The VOA Radiogram program conducts weekly digital broadcast experiments and actively solicits listener reports.

4) AMATEUR SATELLITES

I just discovered Anton Janovsky’s, ZR6AIC’s blog and satellite WebSDR but I haven’t had time to experiment with it. Amateur Radio satellites transmit various combinations of SSB/FM/CW signals and digital telemetry (many use 1200 bps packet radio). The International Space Station (ISS) makes scheduled contacts with school groups as part of



Figure 4: USB SDR Dongle with USB Hub (Tunes from 52 MHz to 2.2 GHz!)



Figure 5: Loopback Audio Cable and Splitter for Digital Modes Decoding (External speaker can be connected to white jack)

the Amateur Radio on the ISS (ARISS) program, and the crew has been busy hand-launching various “CubeSats” built by secondary school and college students, and other organizations. Anton’s SDR satellite server (Johannesburg) uses dedicated VHF/UHF “eggbeater” antennas, and supports HTML5 for recording satellite signals (to process later) for those late night or early morning passes over South Africa.

5) EDUCATION

Many primary and secondary schools don’t have the resources to conduct even basic radio experiments or participate in related educational projects like recording and analyzing radio signals from the Sun or Jupiter (Radio JOVE), etc. Because most classrooms do have computers with Internet access, the WebSDR can be a very useful and valuable tool for educators to combine it with any field of study: science, geography, history, politics, sociology, etc. The ability to record signals and come back in the morning to see what you’ve “caught” should appeal to and excite kids of all ages!

Anyway, the list can go on and on, only limited by your imagination. It should be obvious the future of radio (in its many forms) is rapidly evolving and moving away from traditional “radio”, but you don’t have to understand it to “drive” and enjoy it.

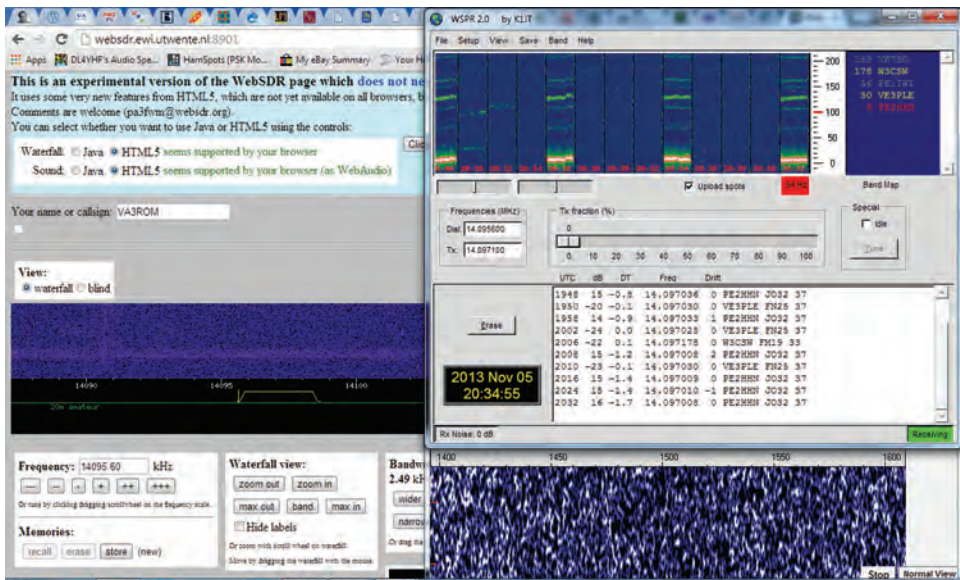


Figure 6: WebSDR WSPR reception and decoding via University of Twente (the Netherlands)

SPRING SPECIALS

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 MFJ-4035MV 30 AMP POWER SUPPLY \$169
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 CUSHCRAFT A3S 3 EL TRIBAND BEAM \$569
 CUSHCRAFT A4S 4 EL TRIBAND BEAM \$719
 CUSHCRAFT A3WS 3 EL WARC BAND BEAM \$495
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 RG-8X MINI 50 OHM COAX .49 FT 200 FT \$90
 450 OHM LADDER LINE .25 FT. 300 FT \$69
 RG-213 98% COPPER BRAID .95FT 200 FT 179
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MY FINAL

In the next column, we'll look at the Broadband-Hamnet (BBHN) and mobile wireless emergency communication (EMCOMM) mesh networks, and I've already written a series of software application tutorials to go with the column. It's amazing, exciting and cutting edge technology the Amateur Radio Emergency Service (ARES) needs to exploit to stay relevant in the 21st century. – 73

REFERENCES AND RESOURCES

Amateur Radio in the Classroom

<http://tinyurl.com/nsw6l6x>
<http://tinyurl.com/pr8qmy7>

ARRL (W1AW) Broadcasts

<http://tinyurl.com/d87aso9>

CWOP

<http://wxqa.com/>

CubeSat Club

<http://tinyurl.com/kk5veqw>

Fidigi Software

<http://www.w1hkj.com/>

Pieter, PA3FWM

<http://tinyurl.com/nc99qv6>

Radio JOVE

<http://tinyurl.com/n4hwke6>

Reverse Beacon Network "Skimmers"

<http://tinyurl.com/l7nmpzw>

University of Twente WebSDR

<http://tinyurl.com/4yofqa>

VOA Radiogram

<http://tinyurl.com/lr4nklw>

WebSDR (Main Site)

<http://websdr.org>

ZR6AIC: Satellite Blog and WebSDR

<http://zr6aic.blogspot.ca/>

VA3ROM: All Things Digital

<http://tinyurl.com/d8nle3l>



2013 ANNUAL REPORT ON DEFENCE OF AMATEUR RADIO FUND

2013 Annual Report on Defence of Amateur Radio Fund

Defence of Amateur Radio Fund Trust
 25 Queens Crescent, Brandon, Manitoba R7B 1G1

FINANCIAL STATEMENT: DECEMBER 31, 2013

BANK BALANCE	January 1, 2013	\$318.23
Deposit	Donations	\$905.00
January 18, 2013	Matured GIC	\$23,512.94
January 23, 2013	Matured GIC	\$11,707.65
Expenses	Bank Charges	\$76.00
January 30, 2013	AON Reed Stenhouse Inc.	
	Directors & Officers Liability Insurance	\$687.46
December 29, 2013	Bryan Rawlings, VE3QN	
	ITU-R SG5 Working Party 5A&5B, Geneva	\$4,883.24
Bank Balance	December 31, 2013	\$6,670.13

BANK STATEMENT

Bank Account RBC Trust 105-535-1 Main Branch Calgary, Alberta	\$318.23
1) April 1/13 \$10,404.00 – 2 yr @1.45% Non Redeemable – Matures April 1/15	
2) February 20/13 \$30,000.00 – 1 yr @1.1% Redeemable – Matures February 20/14	
Total Bank Account December 31, 2013	\$6,670.13
Total of GICs Invested	\$40,404.00
Total Fund December 31, 2013	\$47,074.13
Net Gain in the Fund for 2013	\$2,037.15

Amateur Radio competes with broadcasting, aviation, marine, commercial, governmental, and other interests for the radio spectrum.

The International Telecommunications Union (ITU) holds a World Radio Conference (WRC) every four years to review international regulations and update allocations of radio frequencies for all radio frequency users.

Having a certified Amateur as part of the official delegation gives us a full-time advocate to defend our existing allocations and negotiate for new ones as technologies and the needs of other radio spectrum users change.

Canada is one of a few countries that includes an Amateur representative as a part of the official delegation at the negotiating table, but Industry Canada doesn't pay the Amateur Radio delegate's expenses. The Defence of Amateur Radio Fund (DARF) Trust was created to fund these travel and living expenses by collecting donations from clubs and individual Amateurs.

DARF was founded in 1991 by Tom Atkins, VE3CDM and Bill Loucks, VE3AR (now both Silent Keys) to cover the delegate costs for the 1993 Conference. Because of your continued donations, DARF has been able to fund delegate expenses since then. Only reasonable, pre-approved travel expenses to attend the actual conferences are reimbursed. Use of DARF Trust funds is restricted to supporting delegate activities related to spectrum retention, expansion and the continued recognition of the Amateur Service as a legitimate radio spectrum user.

DARF is independent of Radio Amateurs of Canada and has its own Trustees, who are also independent of RAC. DARF does not support other, non-spectrum related issues such as towers, interference, etc.

DARF has a vacant Trustee/Chairman position. If you are interested please contact Dave (dsnydal@mymts.net) or Gerry (telwest@telusplanet.net).

For more details on DARF please visit:
<http://darf.rac.ca/DARF/Home.html>

Dave Snyder, VE4XN, Treasurer
 Gerry Hohn, VE6LB



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- Digital Group Monitor Function
- Smart Navigation Function



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- Snapshot Picture Taking Capability
- Digital Group Monitor Function
- Smart Navigation Function



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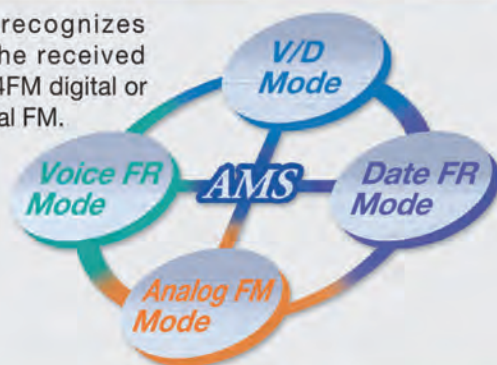
System Fusion provides total integration of Digital and Conventional FM

System Fusion delivers integrated operational functionality that enables you to communicate with other Amateur Radio operators using conventional FM mode while you enjoy advanced digital communication features, such as image, text data and GPS position data using C4FM digital.

System Fusion is designed to enable seamless communication between conventional FM and C4FM Digital Communication using a single unified platform.

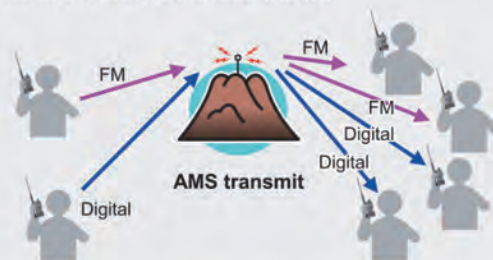
AMS (Automatic Mode Select)

- Instantly recognizes whether the received signal is C4FM digital or conventional FM.



FM Friendly Digital

- System Fusion can be used in multiple ways, for digital communication, for conventional FM communication and even internet communication.



New Functions Enabled by C4FM Digital Communication

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- Image data can be displayed on the screen. (FTM-400DR ONLY)



Smart Navigation Function

- Real-time navigation function enables Location checking at any time.
- Backtrack function for returning to your departure Point.



THE TERRACE AMATEUR RADIO CLUB "PIXIE" PROJECT

Keith Gosse, VE7ECK and
Allen Wootton, VE7BQO

INTRODUCTION

At a meeting of the Terrace Amateur Radio Club in January 2013 we discussed possible projects that we could undertake during the next few months. We decided that we needed a project that all of us would enjoy and learn from.

A few years earlier a few of us had tried building "Pixie" transceivers, simple, crystal controlled 80m CW transceivers. These remarkable transceivers typically use just two transistors and an IC and many examples of the ingenuity people have used in their construction and modification can be found on the Internet. For example, Google "Images for Pixie Transceiver".

From the January meeting's discussion it was decided that we should try building Pixies once again, this time in a more thorough manner so that everyone who built one would achieve good success and acquire new skills and knowledge.

The basis for our Pixie project came from the RSGB book *International QRP Collection: A compendium of QRP articles from around the World*, by George Dobbs, G3RJV and Steve Telenius-Lowe, 9M6DXX, in which G3RJV describes the origin of the Pixie and provides an example circuit (see pages 107-109). A block diagram of the circuit is shown in Figure 1.

As you can see, the block diagram has four key parts. The oscillator uses an inexpensive colour burst crystal to continuously produce a signal at 3.579 MHz. When the key is closed the one transistor mixer/power amplifier acts as a power amplifier to amplify the oscillator signal to about a quarter of a watt and the low pass filter attenuates unwanted harmonics from the signal that is passed to the antenna.

On receive, the signal from the antenna passes through the low pass filter to the mixer/power amplifier where, due to a change in transistor biasing, the same transistor that acted as a power amplifier now acts as a mixer of oscillator and received signals. If the received signal, f_s is higher in frequency than the oscillator frequency f_o and within audio range of it, then the difference frequency $f_s - f_o$ will be selected. If the received signal is lower than the oscillator frequency then the selected mixer output will be $f_o - f_s$. These audio frequencies will then be amplified by the audio amplifier and passed to the headphones.

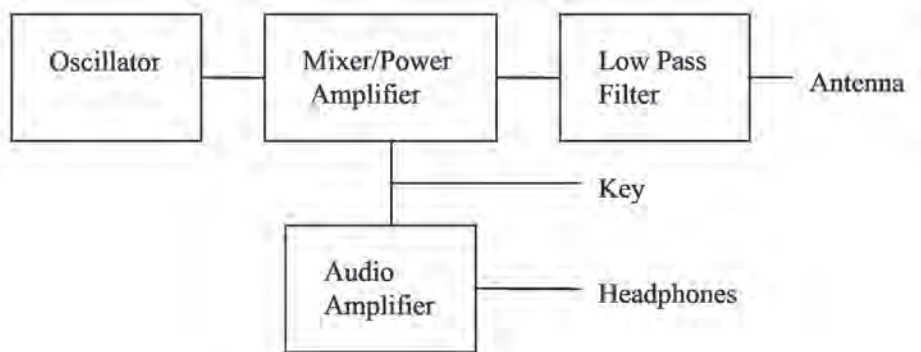


Figure 1: Pixie transceiver block diagram

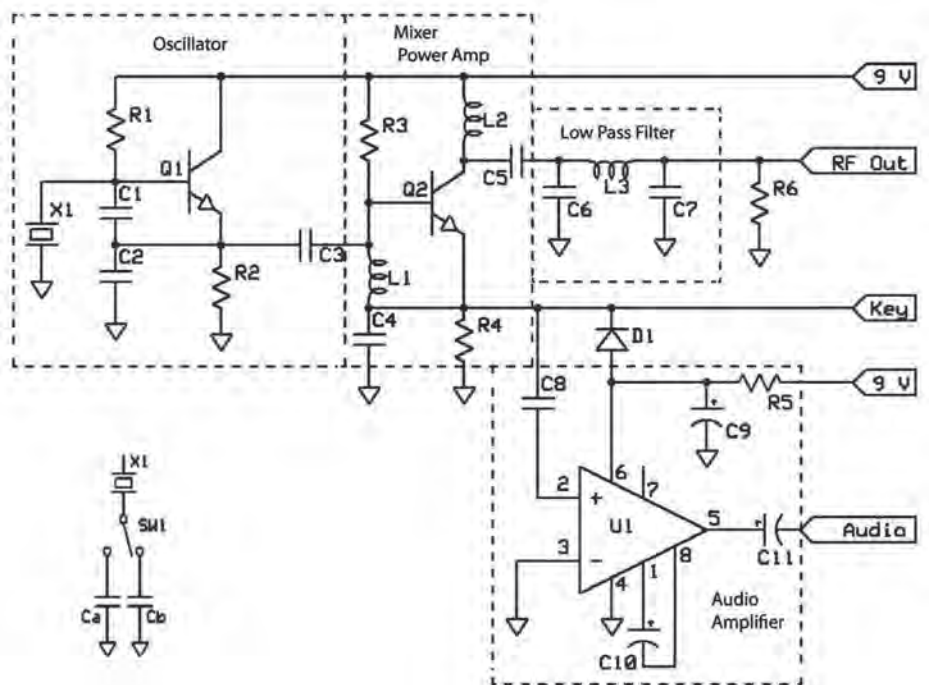


Figure 2: Pixie transceiver circuit diagram.

When we considered the block diagram we decided to break our project up into three parts:

- 1) the oscillator construction and testing
- 2) the mixer/power amplifier construction and testing
- 3) the audio amplifier construction and testing

Although the low pass filter is a very important section of the Pixie (and any other transceiver), we did not make it a separate part. Instead, its construction was incorporated into Part 2, the mixer/power amplifier construction and testing, but we also used a pre-prepared example to see the effect of the filter on the oscillator output in Part 1.

We wrote notes and questions for each section. Then, for three consecutive

Saturday mornings we built our Pixies, in the order oscillator, mixer/p.a. and audio amplifier.

The complete circuit diagram we used is shown in Figure 2 above while the notes and separate circuit diagrams we used are provided on the RAC website at <http://www.rac.ca/tca>. You will find it helpful to refer to these for additional details of the project.

The switch and capacitors shown in the inset Figure at the lower left allow a frequency shift (by pulling the crystal frequency) between transmit and receive.

For simplicity, we began with the crystal connected as shown in the main diagram and added the frequency shifting circuitry after getting the transceivers working.

Ca = 39 pF, Cb = 1000 pF

We built our Pixies “dead bug” or “ugly” construction style on small pieces of single-sided printed circuit board that were cut from a larger sheet. This style of construction is fast and works well; and since there is easy access to the connections between components, it is also easy to make measurements on the circuits. The total cost for each Pixie was about \$10.

Note: For a description of “dead bug” and “ugly” construction see any recent edition of *The ARRL Handbook*.

Each Saturday we began with a brief discussion of theory and the construction challenges for the section being worked on. For example, for the oscillator section we began with oscillator theory, an explanation of “ugly” construction and 2N2222 transistor pin identification (which can cause problems because the transistors and ICs will be upside down for “ugly” construction).

We suggested beginning by gluing the crystal in place with a drop of cyanoacrylate glue and then building from left to right following the circuit diagram. A digital multimeter was handy for checking resistor values and an AADE L/C Meter IIB (<http://aade.com/>) was helpful (but not essential) for checking capacitors and inductors.

After about an hour of construction we made measurements on the completed sections of the transceiver. For these we used an old 10 MHz oscilloscope, an equally old RF generator (both gratefully received castoffs from the University of British Columbia Physics Department) and a homemade step attenuator. We should note that if your club tries a similar project, someone should build each section and make measurements before a club construction meeting so an example is available and that building and measurement goes smoothly for the club members.

PART 1: THE CRYSTAL OSCILLATOR

The crystal oscillator uses a 3.579 MHz crystal. Once the circuit was complete, we connected our oscilloscope at the output to the next stage (the mixer/p.a.) and to the 2N2222 transistor base. In this – and all other oscilloscope measurements – a 10x probe was used.

The waveforms we found are shown in Figure 3. A perfect oscillator would exhibit a perfect sine wave. Real oscillators produce harmonics and you can see this distortion in Figure 3. The harmonics are easily heard on a receiver tuned to 2x, 3x or 4x the 3.579 MHz fundamental frequency.

For an additional test we also added the Pixie’s low pass filter. In preparing for this class we made the Pixie’s low pass filter ahead of time so that it could be soldered in place during the oscillator testing. The effect of the low pass filter is very evident (see Figure 4), even though it is not a particularly good filter.

PART 2: THE MIXER/POWER AMPLIFIER

As for the oscillator, once the mixer/p.a. was complete, we made measurements to test the operation. With the oscillator, mixer/p.a., low pass filter and 50 ohm load connected together, a test lead was used to short the key connections. You can see the somewhat distorted sine wave result in Figure 5.

The nominal 9 Volt battery used for a power supply was measured to be providing 7.7 Volts, so the peak to peak voltage is about the same as the power supply voltage. With the 50 ohm load disconnected, however, the output is quite distorted and the peak to peak voltage is about 11 Volts. Energy stored in inductor L2 at one part of the RF cycle is returned to the circuit at the voltage peaks giving a peak-to-peak voltage that is larger than the battery voltage. You can see why final transistors could be damaged by operating a transmitter without a load.

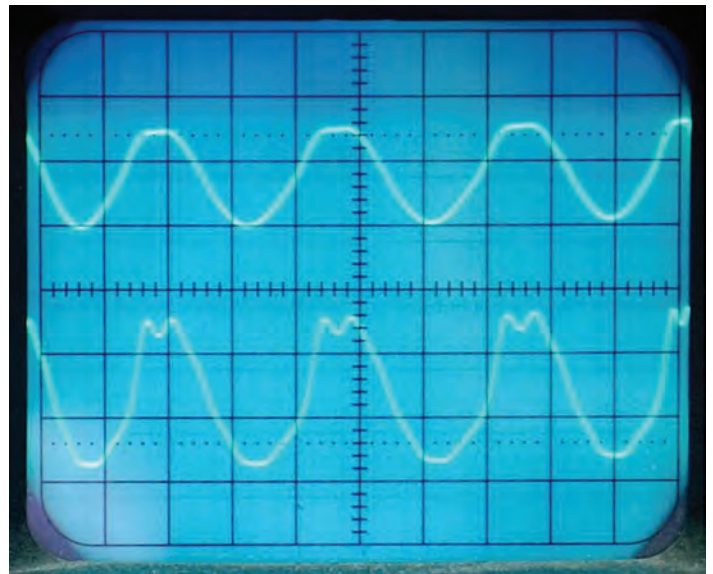


Figure 3: The top trace (5V/div) shows the signal at the oscillator transistor base, the bottom trace (2 V/div) is the oscillator output to the next stage.

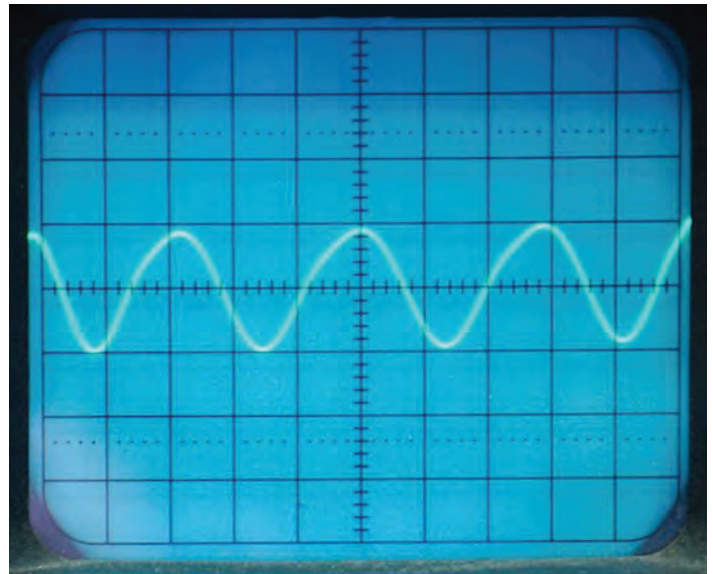


Figure 4: Oscillator output after passing through the low pass filter. A 50 ohm load was connected to the low pass filter output.

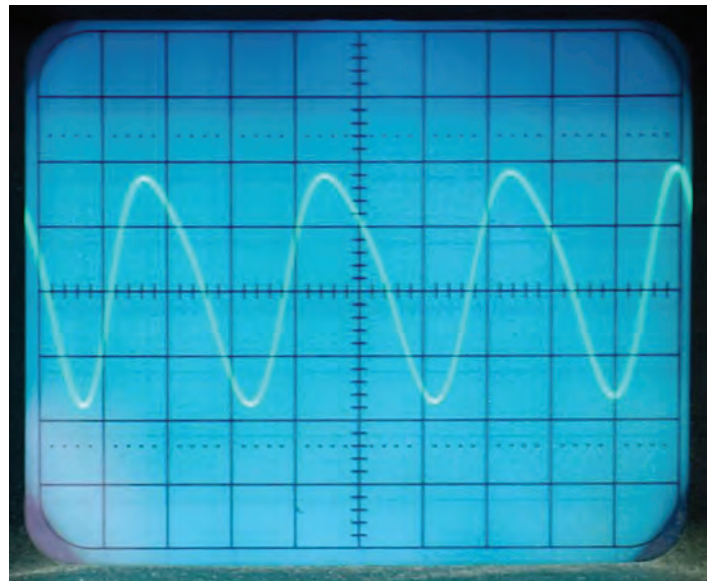


Figure 5: P.A. output from low pass filter. 50 ohm load, vertical scale 2 V/div.

PARTS LIST: (DIGI-KEY PART NUMBERS ARE IN PARENTHESES)

X ₁	3.579 MHz	(CTX1013-ND)	R ₁	47 k	(47KQBK-ND)
C ₁	100 pF	(445-4726-ND)	R ₂	1.5 k	(1.5KQBK-ND)
C ₂	100 pF	(445-4726-ND)	R ₃	33 k	(33KQBK-ND)
C ₃	82 pF	(445-4725-ND)	R ₄	10 k	(10KQBK-ND)
C ₄	0.01 uF	(399-9865-1-ND)	R ₅	1 k	(1.0KQBK-ND)
C ₅	0.1 uF	(399-9866-1-ND)	R ₆	51 ohm	(51QBK-ND)
C ₆	820 pF	(445-4737-ND)	L ₁	100 uH	(M10136-ND)
C ₇	820 pF	(445-4737-ND)	L ₂	22 uH	(M10138-ND)
C ₈	0.1 uF	(399-9866-1-ND)	L ₃	2.2 uH	(M10140-ND)
C ₉	10 uF	(399-6597-ND)	Q ₁	2N2222	(P2N2222AGOS-ND)
C ₁₀	10 uF	(399-6597-ND)	Q ₂	2N2222	(P2N2222AGOS-ND)
C ₁₁	10 uF	(399-6597-ND)	D ₁	1N4148	(1N4148FS-ND)
			U ₁	LM386	(LM386N-1-ND)

We tested the mixer operation of the mixer/p.a. by removing the test lead shorting the key connections and connecting our RF generator to the low pass filter output through a step attenuator. A better RF generator than the one we used would probably not need the step attenuator, but the only reliable way to decrease the output of our generator is with an external step attenuator.

With the oscilloscope connected to the output of the mixer and set to record audio frequencies, we could see very good audio signals when the RF generator was tuned slightly below and slightly above 3.579 MHz. This offered an excellent way in which to show the image frequencies of the mixer. Also, the greater the difference in frequency between the RF generator and 3.579 MHz, the greater the audio frequency. We connected an audio amplifier too, and with this addition both visual and audio evidence of the signals was available.

PART 3: THE AUDIO AMPLIFIER

The audio amplifier uses an LM386 IC that is fastened upside down to the printed circuit board. We used a paint pen to put a mark on the underside, adjacent to pin 1.

Testing proceeded in a similar fashion to the mixer test in Part 2, except here the need for the step attenuator was very evident. Unless the signal from the RF generator was attenuated by at least 40 dB, the amplifier was grossly overloaded and would start oscillating.

Figure 6: RF generator and step attenuator



We connected inexpensive earbuds to the audio output along with the oscilloscope. You can see our RF generator/step attenuator set up in Figure 6.

CONCLUSION

The excitement of seeing a simple project like this come to life should not be underestimated. All of us who took part in this project felt we had learned a great deal and had a lot of fun in doing so. You can see some of us at work in Figure 7.

After three Saturdays building the basic Pixie we spent some additional time fitting the Pixies into cases that included jacks for earphones, key and antenna. Without some provision for a frequency offset, the Pixie transmits and receives on the same frequency so the offset circuit shown in Figure 1 was also added. We used a 39 pF capacitor for Ca and 1000 pF for Cb.

In case you wondered, Simon, VE7SXS and Allen, VE7BQO, have made a Pixie to Pixie QSO over the two kilometres or so between their homes!



Figure 7: Simon, VE7SXS, Ed, VE7JVC and Allen, VE7BQO at work.

Keith Gosse, VE7ECK

Keith has been interested in radio since he listened for his father's transmissions on the BC coast in the 1960s. He became an Amateur in the 1980s and since then has sporadically operated as maritime mobile and from his home station. After raising a family and teaching for 35 years, he is now retired and returns to his interests in nature, photography, astronomy and the experimental side of Amateur Radio.

Allen Wootton, VE7BQO

In his own words, Allen Wootton has been interested in "radio and electronics since I was a teenager and I have held the call VE7BQO since I was 15 in 1964."

"I retired from my job as a high school teacher in 2007 and I am now enjoying having time to pursue my interests in Amateur Radio, photography, woodworking and outdoor activities."



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YL NEWS AND VIEWS

OUR YL PROFILE: DEBBIE UNDERWOOD, KL7OU

Hello everyone. The YL that I am going to talk about lives "Way up North". I am sure that if I mention the song "North to Alaska" by Johnny Horton, you will agree that is pretty far north. I was made aware of her by one of the CLARA girls, who told me that this YL had a great story. So without further nattering, I would like to introduce Debbie Underwood, KL7OU.

Debbie was born in the Territory of Alaska in 1956. Alaska did not become a state until January 3, 1959. She was there when the big earthquake hit in 1964.

She graduated from Chugiak High School in 1974 and went to work on the Trans-Alaskan Pipeline right after school as a labourer. Then she decided that she need to upgrade after three or four year, so, after doing her apprentice in 1981, she became and worked as a Heavy Equipment Operator out of the International Union of Operating Engineers, Local #302.

Debbie did this kind of work for 27 years and then decided to retire. She still likes to stack rocks with

her front-end loader. Her most memorable stack was seven rocks high. It was 30-feet high and was as high as the 988 loader could reach. Debbie told me that she sort of had to flick the last rock out of the bucket and it actually stayed. She said tourists and other people would drive by and take pictures; it looks like a stone totem pole.

Debbie first became interested in Amateur Radio about nine years ago, when her boyfriend (now her partner) was interested in learning CW. He started practising for his licence and she was hooked too; and as she says, CW is like learning a new language! So, long story short, they did it together.

Debbie was first licensed in 2003 as KL1OU and Frank was KL1OT. That was great at first, but she found two metres to be too much like CB radio and so they got their general class licence in December 2004. "HF is where all the fun is!" It was January 2006 when they got their Extra-class licences and their vanity call signs. Frank took WL7O and, even though she said she would never change her call sign, Debbie changed her mind when she found out that KL7OU was available. Too many people questioned her about where KL1 was located. With KL7 they already knew. Of course the next question she is always asked is "are you really in Alaska?" as so many Alaskan call signs have now "gone south".

Debbie loves DXing and then going to the post office to find QSL cards from all over the world. She especially likes the ones she couldn't even pronounce.



Their first antenna was a Carolina Windom 160 and it worked fine. For a few years they had loops and beverage antennas weaving in and out through the trees and looking like a huge spiderweb – especially in the winter when they are all frosted up. "As beautiful as they are, we were ready for towers."



Debbie on her 4-wheeler with Tucker Brown (Chocolate Lab) and Rocket Dog (Golden Retriever).

Their first tower is a 90-foot Rohn 25, with a 20m 4-element, monoband antenna on top at the 92-foot mark. Then at 70 feet (on the same tower) they have a 10 metre, 4-element monoband antenna.

They still have three or four more 10m antennas still to go up. Also on this same tower at the 60-foot mark they have two 13B2 antennas for 2m. Debbie says she can contact Frank in his truck all the way north about 300 miles to Fairbanks with only a few dead spots. On a clear day they can see Mount McKinley which is about 200 miles away. Debbie and Frank bought their piece of property, which is 40 acres, 30 years long before either of them were interested in Amateur Radio. Debbie says it's a great location for their towers and DXing!

Their second tower is 132 feet of AB105 which they affectionately call the "Anti-Tower". The military used it and they had 10 million grunts to put it up. It comes in pieces and can be hauled anywhere. She loves it especially now that is up; and she says it is two feet across on each face where the Rohn 25 is only one foot across each side. They put up a 3-element, 40m linear loaded antenna on the top and a 75 metre-phased square ACB4 antenna system consisting of four folded dipoles. The top is at the 130-foot mark and the bottom is at about 69 feet.

For local nets and contacts they use a 160m, 2-element phased horizontal loop which is supported by five back-guyed spruce poles.

Debbie and Frank have started construction of their third tower, which will be 132 feet of Rohn 25 and used for 160m and no telling what else. At the moment it is only up 60 feet. Debbie said they had hoped to have more of it up, but things are getting covered with snow. She says it will get done eventually. Debbie also said that Frank is finally using the towers! They took their two phased 13B2 antennas for 2m and put them on top of their 40-metre tower so they are up about 140 feet – and they rotate along with the 40 metre antenna. It is fed with 1-5/8-inch hardline. Debbie also told me that Frank changed his call sign. He is now KL7XU, because people get confused with his old sign and keep asking him if he is really in Alaska.

Debbie says that they cleared a bit more of the bush and just for the fun of it they strung a 1200-foot loop as an RX antenna but also set it up to transmit as well. For 80 metres, they put a dipole from their 20 metre tower to their 40 metre tower which is about 80 feet up the 20 metre tower, back around 120 feet up the 40 metre tower. She says everything is working great.

Debbie tells me that they have *lots* of radios. Their first radio was a Yaesu FT-897 and the second was a Yaesu FT-1000MP. Then Frank got her an Icom-756 Pro which she loves, then Debbie splurged and got Frank a Yaesu FT-856 for the truck. Then, to top it off, their spare radio is a Yaesu FT-1000D. No we are not quite finished yet! Debbie bought Frank a radio kit which he built and he then got her a waterproof radio which he installed in her 4-wheeler.

Debbie and Frank had the honour of operating as W1AW/KL7 in 2009. Her station was used for 40 metres and was also a backup station for 20 metres. Debbie is net control every Wednesday for the Alaska Bush net on 40 metres on 7.093, which all Alaskan, Canadian and Hawaiian stations can check in by voice and the lower 48 by CW. She is also net control every third and fifth Friday of the month for the YL system on 20 metres at 14.332.

Frank always tells other hams on the radio “To be very careful what you wish for” as he thought it was a great idea that Debbie was interested in “his” hobby. Now there is the issue of “whose turn is it to play radio? Or to make contact with a DX station or who gets to do a contest.”

Most of the time Debbie is generous and they split the station using the Array Solutions SixPak which apparently works great. (Debbie really lost me on that.) Her side of the station had the Icom IC-756 Pro, with the LDG AT-1000 Auto-tuner and a very forgiving Ameritron AL-80B Amplifier with about 1,000 watts. The other amp uses 3-500Z tubes which she has just bought; once it is ready it will put her up to the legal limit for power. Like Debbie says: “Life is too short for QRP”!

Debbie loves talking on the radio. She says she gets many contacts from Amateurs who were up in Alaska years ago doing military service. Debbie has been to these remote islands – like Amchitka, Adak, Shemya, Cold Bay, King Cove (named the Rat Islands because they were infested with big nasty rats that got off the ships). The bad thing was that the rats ate the migratory bird's eggs! Debbie says it was a bird reserve, but that didn't slow up construction any. She says they should never have allowed people out there to work and she was there 13/14 weeks when she was in her early 30s; working and playing all over that island. Some people found interesting artifacts, but all Debbie found were three seagull eggs that she saved from being shoved up into a pile for drilling and shooting. Birds were nesting and circling the piles looking for their nests and babies and she kept going out there trying to save them. She did get one to hatch but a veterinarian took it away because it was a migratory bird.

Debbie says the best part of it all was that she met Frank on Amchitka Island. She says the Bering Sea winds come in from the north and blow at the island, and the mighty Pacific Ocean winds come from the



The station complete with cookies.

south. Winds were incredibly strong, 50 to 80 mph; so strong you could hang way over a cliff and just let the wind hold you up to keep from falling. Amchitka was also the site of three underground nuclear detonations in October 1965, October 1969 and November 1971.

Debbie says that when she talks to Amateurs from around the world that the radio takes years off her life. One ham from Australia said it was real nice of Frank (who he assumed was her father) to let her stay up so late cause it had to be way past her bedtime.

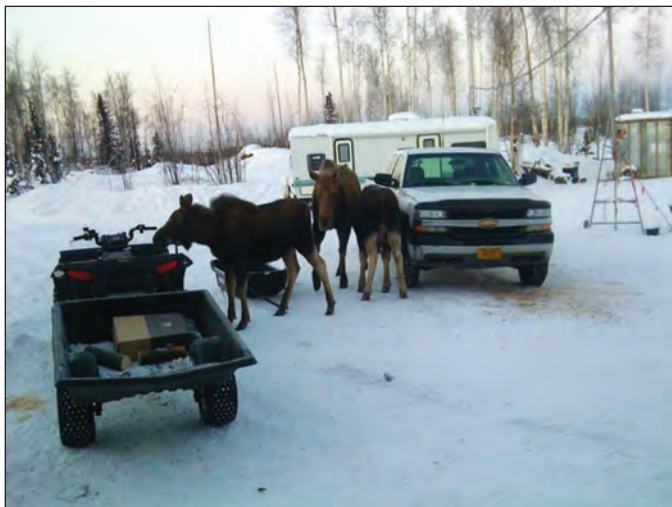
Debbie and Frank love animals. They have had four dogs. The first two were Chocolate Labs, Buster Brown and Tag, but sadly they have now gone to puppy heaven due to old age. Their new dogs are again a Chocolate Lab called Tucker Brown and a Golden Retriever called Rocket Dog. They also have a baby blue and gold Macaw parrot and a yard full of about 70 rabbits not counting the 200 small finches who frequent their bird feeders, the 200 ducks who show up in November and a humongous Moose who likes to eat the rabbit and bird food

My last conversation with Debbie was on January 15 and she said she was busy getting the camping gear ready because she and Frank were going camping. They have an Arctic Oven Tent and they were going ice fishing for a couple of days as she wanted to try out her new auger. This gal certainly likes to have fun.

Well that's Debbie's story. I sure hope you enjoy reading it as much as I enjoyed bringing it to you. Debbie is a great inspiration to other YLs to get out there and get on the radio. Thanks Debbie! I greatly appreciate all the info.

Don't forget the CLARA contest coming up in March. Visit <http://www.clarayl.ca> for more information. Take care everyone.

33, 73, 88 or whatever the case may be...
Val. VE5ACJ





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Things of Hamness 2014

Though the holiday season is over, I still want to pass along 12 ideas of things you new Amateurs can do throughout 2014 to get more experience in our hobby. You don't have to do only one item each month. You can do two or three within a month, or even combine a few together at once. It's your choice, but whatever you do, enjoy the experience and have a lot of fun.

1) Talk to a complete stranger: Although your mom was right to never talk to strangers, in our hobby it's only natural and is heartily encouraged. Get on your radio, listen to your local repeater, and then contact another Amateur that you have never communicated with before. Chat them up, get to know them, and make yourself a new online friend. Even if you do this a couple of times a month, by the end of the year, you will have made yourself so many new acquaintances within your local Ham community that you won't have any room to put all the holiday cards.

2) Find the physical location of a local Amateur:

Use your HT as a directional finder by taking off the antenna and homing in on a local Amateur talking on simplex or on a repeater input frequency. As well as

FRESH ON THE AIR

— ADVENTURES FOR THE NEW AND BEGINNING HAM

bordering on stalking, this exercise will hone your direction-finding skills for use when you will need them most, such as during a Search and Rescue operation or on a fox hunt contest. This activity would probably be best with another Amateur that you know.

3) Build something: Construct something, anything, even a simple quarter-wave dipole antenna for base or field operations. It doesn't matter what you build as long as it is Amateur Radio related such as a low-power CW transmitter, dummy load, SWR meter and other such needful things. Many of these "buildy" things even come as kits! Hone your soldering skills while making a practical accessory.

4) Talk to people from outer space:

Try communicating with the astronauts or cosmonauts onboard the International Space Station. Wouldn't it be cool to say to family and friends that you talk to people from outer space? And wouldn't it be even cooler to prove it with a QSL card so they don't call the hospital on you?

5) Donate an hour or two of your time:

Donate an hour of your time to your local Amateur club during a regular meeting or special event. Put out chairs, clean up afterwards, make the coffee, whatever you want. Give back to the hobby for what it provides to you.

6) How low can you go? Get together with another Amateur and see how much of a combination of lowest output power and furthest distance on VHF or UHF you can go and still talk to each other. Try this on the ground and from mountain top to mountain top. You may be surprised at the distance you can actually talk when on low power.

7) Freak out the public: Walk around with your radio turned up loud on your favourite local repeater so people can hear contacts or repeater identification. Then talk up Amateur Radio when they ask what that was. Unfortunately, they will also ask you if you're a cop, a secret government agent or, in my case, if I was a "radio dispatcher for a tow company or something." What? Just because I'm middle-aged, busted up and overweight means I can't be a government agent? Radio "dispatcher", really?

8) Learn something new: Read about Amateur Radio and learn something you knew nothing about beforehand. Read up on HF operations, digital communications, Amateur history, and other such topics. There is so much to learn about our hobby that you will not have time to do anything else.

9) Shut yer mouth! Try CW, even it is just to copy it. You don't have to always talk. CW, packet and digital data modes abound. Pretend you're mute and try something quiet for a change.

10) Go mobile, baby: Make a mini mobile unit with your HT and an external antenna and microphone on a baby carriage, bicycle, scooter, etc. Now how cute would it be pushing a stroller of twins down the street with a five-eighths VHF whip on the frame and your HT mounted on the handle while you swap stories with another Amateur over the air? Cute. Very cute.

11) Maybe you should talk to your kids:

Get really radical and ditch the Amateur Radio unit and teach your kids how to use a radio properly with General Mobile Radio Service (GMRS) units. Your kids can pretend they are semi-Amateurs and you can help them appreciate and respect two-way radio. Plus GMRS is a great way of exposing the kids to our hobby in a roundabout way.

12) Save the planet: Experiment with alternative power such as solar or wind. Many Amateurs construct a solar battery charger to trickle charge their HT battery packs to save on household electricity costs.

There is so much information on the Internet about Amateur Radio, including kits, that it is impractical to list them here. Do an Internet search on what you want to find (for example, "CW QRP transmitter", "fox hunt", or "directional finding", "amateur radio kits") and you will find something to titillate your mind and stimulate your imagination. You can also contact your local Amateur Radio club to see if they have any of these activities going on or if they can send you to a member who can give you more information and help you out.

Transmission Tidbit:

From Wikipedia: Top Ten Amateur Radio countries by number of operators (under the subject Amateur Radio operator): Japan, United States, Thailand, South Korea, Germany, Canada, China, Spain, United Kingdom and Russia.

I would love to hear from our new female and very young Amateurs on your first impressions of the hobby, both positive and negative. Write me via the magazine; email me at phillipjboucher@gmail.com or via my website at: <http://www.phillipjboucher.com>

It's here! It's here! "The Almost Complete Guide to Yaesu's VX-6R" is now available in PDF for \$14.95. Visit my website to order.



A VISIT TO THE MANITOBA AMATEUR RADIO MUSEUM

Bill Karle, VE4KZ

INTRODUCTION

You know how you intend to do something but it repeatedly gets put off? That was the case with my oft-intended but oft-postponed trip to the Manitoba Amateur Radio Museum (MARM). The XYL and I figured it was about time to take a trip to central Manitoba and see MARM, located on the grounds of the Manitoba Agricultural Museum.

The founder is Dave Snydal, VE4XN, well-known Manitoba Amateur. When the XYL and I arrived, after a couple hours drive from our home, Dave toured us around. We had a grand time looking at the hardware, learning facts that we did not know, and visiting with Dave.

MARM is a living museum in that the collection continues to grow with additions of vintage and modern equipment while including a functioning Amateur Radio station, a repeater and beacons.

PUBLIC PART OF MUSEUM

When Dave and his colleagues started working on the project, the vision was to show ham radio through the decades. As a base, there already was an Amateur Radio station on the Agricultural Museum's grounds, established in 1980. By 1984, MARM was born and began operating out of a part of a refurbished train station on the grounds.

As the years went by, it became clear that proper space was necessary. Gumption, and no small amounts of arm-twisting and grant seeking, eventually resulted in the construction of the MARM display building in 1991.

The first impression upon entering this building is the odour of pre-modern electronics! You know, that smell of cotton covered wire, beeswax, shellac,

Note: Dave Snydal, VE4XN, licensed in 1962, has distinguished himself in many ways. In addition to being an inductee of the Canadian Amateur Radio Hall of Fame (2000), he also served as Mid-west Director of the Canadian Radio Relay League (1990-1993); served in various capacities with the International Ham Fest, Brandon Amateur Radio Club, the Canadian-American Repeater Council, the Amateur Radio League of Manitoba, and more. He was behind establishment of repeaters VE4BDN, VE4CTY, VE4IHF, VE4MTR and VE4TED. He is a trustee of RAC's Defence of Amateur Radio Fund. While being of great service to the amateur and other communities, he also has racked up over 220 DXCC entities and has completed working all US counties.

dusty tubes and, one imagines, a trace of ozone. And no wonder since you are greeted by floor to ceiling shelves of electronic gear plus map file drawers of interesting documents.

The second impression is how well organized everything is. Each item has a label naming the hardware and giving a little added information such as the era from which it is drawn. The XYL and I both remarked at how clean everything was; nary a dust bunny in sight.

The museum includes equipment and accessories that are commercially manufactured, constructed from kits and homebrewed. I drifted down memory lane picking out my first homebrew transmitter, first kit transmitter, first "good" receiver, and on and on.

The displayed items cover much of Amateur Radio's history. For example, there is a serviceable spark gap transmitter and a long wave crystal receiver from the 1910-19 decade. Jump forward a few years and lay your hands on a Tuned Radio Frequency (TRF) receiver with its manifold knobs and low voltage vacuum tubes designed to run from batteries.

Turn the clock forward some more and marvel how the basic five-tube superheterodyne receiver – that brought radio to the millions – after being gussied up with a beat frequency oscillator made a functional receiver. Skip forward some more and witness the quest for sensitivity, selectivity, dynamic range and low noise



in the post World War Two receivers. At the same time, the first single sideband transmitters began to become commonplace. Another twirl of the MARM time machine and you see rigs reaching into the VHF and UHF spectra. One more turn of the time dial and observe our modern solid-state integrated circuit rigs.

It is not only hardware on view. Those map drawers hold paper documents and photographs that will, in my case, require more time to appreciate. For example, there is a "cease operation notice" that went out to the Canadian Amateur population within days of the September 1939 declaration of war on Hitler's Germany by the British Empire, of which Canada was a part.

Should you go to MARM with family members not interested Amateur history, know that Internet access via Wi-Fi is available. How considerate!

AMATEUR RADIO STATION

Amateur Radio Station, VE4ARM, is in a room lined with glass windows immediately adjacent to the display area.



The public can observe hams operating the modern and/or vintage stations or toiling at the well-equipped workbench.

The station includes a rotating Yagi-Uda beam up 15 metres (50 feet) as well as dipole antennas.

Floor to ceiling shelving, of which this is only one section, displays equipment for all Amateur Radio eras.

One of two operating positions in the ham station part of the museum.

There is a two-metre FM repeater, VE4MTR, with its antenna up 30 metres (100 feet).

The design is thorough. For example, the observant will notice AC outlets in the ham station, with red-coloured faceplates denoting that these outlets are supplied by one of the three generators that MARM maintains.

Near the entry door is a master switch: one pull and the entire station is disconnected implementing the adage "switch to safety". As a side note, each building similarly is protected: no leaving the MARM workshop, located elsewhere on the grounds, with a soldering iron smouldering on the bench.

NON-PUBLIC PARTS OF MUSEUM

Far from public areas are two buildings owned by MARM: one serves as a workshop and the other as a store of equipment and materials not on display. A third structure owned by the Agricultural Museum garages MARM's vehicles.

The workshop is used to catalogue, evaluate and refurbish newly arrived acquisitions. There are workbenches, cabinets of large and small parts, and necessary hand and power tools. In short, it is shop to die for! It is encouraging to know that a cigarette-smoke encrusted Collins S-Line ensemble, resting on the floor, will be resurrected to presentable condition in this shop by volunteer hands.

The storage building has shelving groaning under loads of equipment, accessories, vacuum tubes, books and magazines. Most are catalogued and tagged.

Dave Snydal, VE4XN (left) and Bill Karle, VE4KZ, discuss one of the documents.



For example, there are many boxes of tubes. These are a resource not only for MARM efforts, but also for radio restorers who regularly visit in order to find parts for their work. Dave comments that these and others, such as the fleamarket buyers, contribute funds to support the museum.

The garage building covers MARM's wheeled vehicles including its float. Float? Yes. With high profile events happening at the Manitoba Agricultural Museum, such as the Threshermen's Reunion, MARM likes to show off its contributions and one way is to join the parade. MARM also has golf carts helping folks get around. The wheeled generators are stored here.



SPARK PLUGS

Clearly this enterprise, for MARM is nothing less, did not spring forth overnight.

In addition to Dave, the visionary and main-man, three hams are recognized in the Museum as having created the facility. All now Silent Keys, they are Bill Williams, VE4IW, Bob Bryan, VE4RO and Bill Panting, VE4KX. I noticed that Murray Ronald, VE4RE, a well known Winnipeg entrepreneur, also has made significant contributions toward a building and towers.

Hundreds of others have made donations of time and money as Founders, Life Members and Friends.



A view of a portion of the Shop Building.

CONCLUSION

The Manitoba Agricultural Museum is located just off of the Trans-Canada Highway, near the town of Austin. It is about two hours west of Winnipeg and one hour east of Brandon.

The Museum's website has a map as well as pictures and information to whet your appetite. It can be found at: [http:// www.marminc.ca](http://www.marminc.ca)

That's the story of our trip to The Manitoba Amateur Radio Museum.

The XYL and I both agreed that we must return, and soon!

Bill Karle, continuously licensed since 1957, has held calls K8QGT, VE2ECW, briefly 4S7KZG, and presently VE4KZ. Bill is a Certified Emergency Coordinator. His Amateur Radio interests include propagation, antennas, digi-modes and DXing. He is retired following a career in international consulting, university teaching and university administration.

RAC CANADA DAY CONTEST 2013 RESULTS

Bart Ritchie, VE5CPU and Sam Ferris, VE5SF

With Canada Day falling on a Monday this year, it was expected that we would see a lower level of activity compared to last year and that was certainly the case. While there was a drop in participation compared to last year that is really in line with prior years when the holiday falls within the normal work week. Once again there were notable comments around propagation, especially from those outside of North America. With that bit of introduction, on with the detailed results!

SINGLE OP ALL BANDS HIGH POWER

Paul Newberry Jr., N4PN wins the SOABHP plaque sponsored by Radioworld, with a score of 572,562. Paul also takes the Larry Kayser, VA3LK Memorial Plaque sponsored by Alan Goodacre, VE3HX, for the Top Scoring Single Operator's Foreign Entry – Any Authorized Power. Ed Richardson, VE4EAR, utilized the VE4RAC call sign and takes second place this year with a score of 490,866 and Tom Haavisto, VE3CX, takes third place finish this year with a score of 383,104.

SINGLE OP ALL BANDS LOW POWER

Dick Van Zandt, K9OM, piloted his station to a first place finish in the SOABLP category and takes the plaque sponsored by Contest Club Ontario with a score of 177,940. Jean Charron, VE2JCW, takes second place this year with a score of 145,200. Third place goes to Ed Henderson, VE4YU, with a score of 137,298.

SINGLE OP – QRP

The QRP battle once again brought all new players to the top three with Thomas J. Warren, K3TW, taking the first place plaque in the SOABQRP category sponsored by QRP Canada, with a score of 73,390. Second place goes to Dave Fischer, KS0MO, with a score of 47,718. Third place has a tie this year, a rare occasion in the Canada Day contest. Robert MacKenzie, VA3RKM and Dave Stephenson, VE3PYG, tied with a score of 31,320 points.

SINGLE OP ALL BAND PHONE

Alan Swanick, VA6UK, moved into first place this year capturing the SOABPH plaque sponsored by the Saskatchewan Contest Club with a score of 90,936. Perry Langelier, VA7FC, takes second place with a score of 56,836 and Arthur Payne, VE3SY, takes third place with a score of 54,270.

SINGLE OP ALL BAND CW

Gabor Horvath, VE7JH (operating from VE7UF's station) takes first place with a score of 181,440 capturing the SOABCW plaque sponsored by the Maritime Contest Club. Second place goes to Bill O'Kain, K4LTA, with a score of 122,430. Ralph Parker, VE7XF, rounds up third place with a score of 113,334.

PLAQUE WINNERS

Single Operator All Bands High Power Sponsored by Radioworld

Paul Newberry, Jr., N4PN, with a score of 572,562

Single Operator All Bands Low Power Sponsored by Contest Club Ontario

Dick Van Zandt, K9OM, with a score of 177,940

Single Operator All Bands – QRP Sponsored by QRP Canada

Thomas J. Warren, K3TW, with a score of 73,390

Single Operator All Band Any Authorized Power Phone Sponsored by Saskatchewan Contest Club

Alan Swanick, VA6UL, with a score of 90,936

Single Operator All Band Any Authorized Power CW Sponsored by Maritime Contest Club

Gabor Horvath, VE7JH, with a score of 181,440

Single Operator Single Band Any Authorized Power Level Sponsored by Radioworld

John Colyard, W4IX, with a score of 127,380

Multi-Operator Single Transmitter High Power Sponsored by Alfa Radio

Rick Williams, VE9HF, with a score of 253,368

Multi-Operator Single Transmitter Low Power Tony Allsop, VE3FTA Memorial Sponsored by Mississauga ARC

Marcel LeBlanc, VE9ML, with a score of 432,864
Ops: VE9ML & VE9BK

Multi-Operator Multi Transmitter Any Authorized Power Level Sponsored by Radioworld

Igor Slakva, VE3ZF, operating as VA3RAC with a score of 782,130
Ops: VA3ATT, VE3FJ, VE3KAO, VE3NFR, VE3RA & VE3SSR

Top Scoring Single Operator Foreign Entry Larry Kayser, VA3LK memorial plaque sponsored by Alan Goodacre VE3HX

Paul H. Newberry, Jr., N4PN, with a score of 572,562

SINGLE OP SINGLE BAND

20 metres continues to be the main band for those in the SOSB category and again produced the top three scores in this category. John Colyard, W4IX, takes first place and the SOSB plaque sponsored by Radioworld with a score of 127,380. Robert Nash, VE3KZ, takes second place with a score of 109,250 and our top three rounds out with an entry from Radio Klub Belisce, 9A3B, with a 57,596 point tally.

The complete listing shows the band by band breakdown and power levels for those who like to keep track of that element of SOSB even though it is not an official part of the contest format. This category was our most popular one for a fourth year running attracting 113 entries and edging out SOABCW by 8 entrants for most participated in category.

MULTI-OPERATOR SINGLE-TRANSMITTER HIGH POWER

Rick Williams, VE9HF, and his use of the "network" takes first place in the MOSTHP category. He captures the Alfa Radio sponsored plaque with a score of 253,368. The Kings County Amateur Radio Club (KCARC) VE1LD, takes second place with a score of 223,110. Barry Cohen, N2BJ, operating in assisted mode, takes third place this year with a score of 217,098.

MULTI-OPERATOR SINGLE-TRANSMITTER LOW POWER

Marcel LeBlanc, VE9ML, along with VE9BK, takes first place this year with a score of 432,864 capturing the MOSTLP Tony Allsop, VE3FTA Memorial plaque. The Mississauga Amateur Radio Club, VE3MIS, takes second place this year with a score of 337,172; and Rebecca Kimoto, VA7BEC, along with VA7KO takes third place with a score of 203,262.

MULTI-OPERATOR MULTI-TRANSMITTER

Igor Slakva, VE3ZF and his team VA3ATT, VE3FJ, VE3KAO, VE3NFR, VE3RA and VE3SS, using the VA3RAC call, takes first place this year in the MOMT category, capturing the plaque sponsored by Radioworld, with a score of 782,130. Gordon R. Kosmenko, VE6SV and his team take second place with a score of 779,940. Our third place finish goes to the ORCA DX and Contest Club VA7ODX using the VE7RAC call with a score of 435,774.

A FEW STATISTICS

Logs submitted	471
Canada	2,187
US	178
Other countries	98
Total QSOs	74,137

TOP SCORING SINGLE OPERATOR FOREIGN ENTRY

As noted in the SOSBHP results, Paul Newberry, Jr., N4PN, piloted his station to the highest placing single operator from outside Canada with a score of 572,562. This earns him the Larry Kayser, VA3LK Memorial plaque sponsored by Alan Goodacre, VE3HX.

We appreciate all the Cabrillo formatted logs, but encourage you all to check to make sure all the pertinent information is correct in the Cabrillo headers. Not all of you are getting the correct entry classes entered in the header due to limitations in your software. Please make sure you are using the most current version available.

The RAC Contest Management Team continues to get the results out as quickly as possible with as much accuracy as we can. In the event we have let any errors in, please accept our apologies and be assured we will be happy to correct any problems that are identified and publish any updates on the RAC website.

CANADA DAY CONTEST 2014

The contest managers look forward to the contest and hope to see increased participation during the 2014 running of the Canada Day Contest, which is scheduled for July 1, a Tuesday this year. Please join us as it is a great way to spend part of the Canada Day holiday!

The RAC website at <http://www.rac.ca/en/rac/programmes/contests/> has all the contest rules and entry forms.

A Cabrillo formatted electronic log submission really helps to manage the work to compile the contest results. Although we encourage electronic logs, we will continue to accept paper logs for small entries (less than 100 contacts).

If you are not submitting a Cabrillo log, we ask that those entrants include a summary sheet providing the required information and, where possible, a breakdown of VE, RAC and DX contacts as well as the multiplier total. This will make compiling and checking of logs a bit easier and aids to a quicker turnaround of the results.

As a reminder, when submitting email entries, please make the subject line meaningful.

Our preference is Call – Category – RAC Canada Day.

For example: VE5CPU – SOABHP – RAC Canada Day.

To those who participated in 2012, THANKS and we hope you enjoyed the event!

Good luck in the 2013 RAC contests.

73, Bart, VE5CPU and Sam, VE5SF



RAC CANADA DAY CONTEST RECORDS (updated with 2013 results)

CANADIAN RECORD SCORES

Call	Category	QSOs	Mult	Score	Year
VE3EJ	SOABHP	1513	118	1,243,956	2008
VE5SF	SOABLP	884	95	658,540	1999
VE3KZ	SOABQRP	468	79	309,048	2002
VA7RR	SOSB*	1531	25	233,150	1999
VE6JY	SOABPH	906	55	421,850	2007
VA2WDQ	SOABCW	820	48	189,216	2010
VE6AO	MOSTHP	1092	76	526,984	2008
VE3MIS	MOSTLP	867	73	379,200	2007
VE6JY	MOMT*	2671	119	1,898,764	1999

*The official category does not have a power class designator.

*No new records in 2013

CANADIAN SINGLE BAND RECORD SCORES

Call	Category	QSOs	Mult	Score	Year
VE3VZ	SOSB - 144	66	3	2,046	2005
VE3FIT	SOSB - 50	43	6	2,364	1998
VE1CZ	SOSB - 28	183	9	7,128	1997
VE6JY(opVE5MX)	SOSB - 21	957	20	72,800	2001
VA7RR	SOSB - 14	1531	25	233,150	1999
VE3TA	SOSB - 7	612	20	68,800	2009
VE3BY	SOSB - 3.5	447	15	64,800	1997
VE3DO	SOSB - 1.8	82	18	11,412	1996

No new single band records in 2013

RAC CANADA DAY CONTEST 2013 MULTI OP LIST AND CHECK LOGS

Call Sign	Operators
G3ORY	G3ORY
K1SD	K1SD
K4IU	K4IU
K5MXG	K5MXG, K5NZ
N2BJ	N2BJ
N2NS	N2NS
N3NZ	N3NZ
N3QE	N3QE
N3UA	N3UA
N4AAI	N4AAI
N4AF	N4AF
N4DW	N4DW
N5CW	N5CW
NK6A	NK6A
PI4DX	PD1DX
S59T	S59T
SP1MHZ	SP1MHZ
VA2BCA	VA2BCA
VA2RAC	VA2RC, VE2SG, VE2EBK, VE2RO
VA3KAI	VA3KAI
VA7BEC	VA7BEC, VA7KO
VE1LD	VE1FA, VE1QY, VE1TT, VA1YL
VE3DC	VA3TUR, VE3BK, VE3DCU, VE3FEZ, VE3HTE, VE3MWH
VE3HEU	VE3HEU
VE3JDF	VE3JDF
VE3MIS	VE3IMG, VE3VE, VE3CWU
VE3SSR	VE3SSR
VE3VV	VE3VV
VE3VZ	VE3VZ
VE4EA	VE4EA, W6NF, K7MKL
VE5RI	VE5CJB, VE5FN, VE5WI, VE6BYN, VE6CMV, VE6NFL, VE6SPS
VE6AO	VE6TC, VE6KC, VE6CCL, VE6HWE, VE3RIA, VE6STP, VA6MCB
VE6RAC	VE6JY, VE6IVN, VE6EC, VE6STE, VA7BB, VE6AQ, VA6AWS, VE6OH, VA6BSD, VE6KD
VE6SV	VE6SV, VE6RST, VE6TL, VE6LDX
VE7BFC	VE7SDI, VE7WNK
VE7NA	VE7JLO, VA7DSW, VE7ECO, VE7GDE, & VE7BGP
VE7NSR	VE7KW, VE7AM, VE7SWL, VE7FTO
VE7RAC	VA7XB, VE7ACN, VE7GM, VE7IO, VE7JT, VE7OFH, VE7TI, VE7WJ

Check logs **

GW0BBO, PA9WOR, VA3YT, JJ5HUD, R2LAC, DL5SVB, VE7XF, DM5DX

Note: In the following results ** indicates a Category winner and an * indicates a Certificate winner

SINGLE OP ALL BANDS HIGH POWER (SOABHP)

Call	Score	CDN	RAC	DX	QSOs	Mult
N4PN	572,562	636	39	579	1254	69 **
VE4RAC	490,866	537	23	642	1202	69 *
VE3CX	383,104	375	31	808	1214	64 *
W5WMU	368,512	416	25	549	990	64 *
VE3RZ	252,928	247	24	501	772	64 *
K3ZO	229,350	330	25	185	540	55 *
VE7GL	226,928	309	23	407	739	52 *
K6MMM	206,346	296	24	303	623	51 *
K4BAI	195,648	299	17	373	689	48 *
VE6ZZZ	175,448	231	17	362	610	52 *
VE3EJ	156,600	212	17	336	565	50 *
K9MMS	151,524	198	13	283	494	54 *
KA6BIM	94,380	262	15	113	390	30 *
N6GP	74,676	117	20	104	241	42 *
N9WKW	23,050	60	11	51	122	25 *
W1EBI	22,100	52	9	92	153	25 *
SK2T	18,576	68	4	136	208	18 *
K1JB	17,004	52	4	27	83	26 *
AH6EZ-W9	16,000	24	13	0	37	32 *
VO1UL	14,896	58	9	12	79	19 *
KO7X	13,072	44	7	54	105	19 *
K1BV	12,580	43	2	135	180	17 *
VE3TW	9,112	35	7	23	65	17 *
K6KR	6,960	33	6	7	46	15 *
AD7MQ	3,900	25	7	0	32	10 *
NG7M	3,336	17	2	34	53	12 *
VA2QR	2,430	12	6	15	33	9 *
SM4DQE	1,596	7	0	98	105	6 *
VE3MEW	8,712	35	4	27	66	18 *
W6FA	4,030	23	4	0	27	13 *
VA3PAW	1,854	14	2	13	29	9 *
AE6YB	600	9	3	0	12	4 *

(#) Top Scoring Single Operators Foreign Entry – any authorized power
Larry Kayser, VA3LK Memorial Plaque sponsored by Alan Goodacre VE3HX

SINGLE OP ALL BANDS LOW POWER (SOABLP)

Call	Score	CDN	RAC	DX	QSOs	Mult
K9OM	177,940	197	23	220	440	62 **
VE2JCW	145,200	166	17	320	503	55 *
VE4YU	137,298	200	24	161	385	49 *
VE5ZX	108,630	185	7	212	404	45 *
K9YC	106,878	152	25	127	304	47 *
K0HB	105,400	165	19	39	223	50 *
VE3RCN	96,324	146	19	127	292	46 *
NW2K	96,210	139	15	224	378	45 *
AA3S	94,944	168	17	94	279	43 *
VE3BW	91,000	107	21	130	258	52 *
VE7CV	83,660	125	21	55	201	47 *
VA3EC	77,560	130	13	328	471	35 *
VE2ZT	73,040	119	14	95	228	44 *
VO1GO	69,200	114	16	135	265	40 *
WA2JQK	58,128	89	14	107	210	42 *
VE3CES	54,858	87	14	94	195	41 *
VE3FZ	54,792	112	7	131	250	36 *
K3KU	52,010	102	10	133	245	35 *
K4DJ	50,922	129	14	158	301	27 *
W9WLX	48,688	97	13	101	211	34 *
W1YO7ARY	35,496	68	8	102	178	34 *
K9PMV	33,524	72	14	78	164	29 *
N0UV	31,374	95	9	16	120	27 *
KS4X	30,072	83	11	12	106	28 *
VE3IAE	23,552	69	5	117	191	23 *
VE3XT	23,250	62	8	75	145	25 *
VE3RTL	21,476	59	7	48	114	26 *
NF8M	20,800	45	8	95	148	26 *
VE3AAQ	18,640	50	7	146	203	20 *
W1PR	18,624	63	7	3	73	24 *
VE3GFN	16,968	47	5	119	171	21 *
W2RDS	16,236	54	8	19	81	22 *
VA2RIO	15,696	42	9	27	78	24 *
VE3EP	15,532	39	9	68	116	22 *
K8GT	11,080	36	5	47	88	20 *
K6MI	9,400	31	7	10	48	20 *
N1NN	8,160	33	2	70	105	16 *
KD6WKY	7,740	33	8	13	54	15 *
VE2AWR	7,470	27	5	64	96	15 *
VE3SPF	7,224	44	2	18	64	14 *
N7VS	7,208	22	7	32	61	17 *
VY2RAC	7,164	57	5	63	125	9 *
K8FZY	6,560	30	2	35	67	16 *
VE1LS	6,240	23	7	10	40	16 *
AF5CC	5,180	24	4	25	53	14 *

EA8AQV	5,070	31	4	0	35	13	*
VE3EMB	4,110	23	1	12	36	15	
VY2MP	3,916	27	3	13	43	11	
VE3DMR	3,810	19	2	12	33	15	
VE3CNA	3,740	22	6	17	45	10	
NV9X	3,146	19	2	28	49	11	
UT1IM	2,422	16	1	83	100	7	*
VE4UR	2,320	14	4	6	24	10	
K6RM	2,160	18	3	0	21	9	
VO1BQ	1,908	13	1	31	45	9	
KC0DEB	1,800	13	1	0	14	12	
K6TIG	1,700	15	1	0	16	10	
VE3EXW	1,296	2	7	1	10	8	
DF2SD	700	10	2	0	12	5	*
W4BK	400	4	3	0	7	4	
RT9X	348	5	1	23	29	3	*
K5HM	328	6	1	1	8	4	
VE2HKW	22	2	0	1	3	1	

SINGLE OP ALL BANDS QRP (SOABQRP)

Call	Score	CDN	RAC	DX	QSOs	Mult
K3TW	73,390	123	15	130	268	41 **
KS0MO	47,718	93	11	148	252	33 *
VA3RKM	31,320	58	7	75	140	36 *
VE3PYG	31,320	68	8	102	178	30 *
VE3CW	20,340	43	7	54	104	30 *
VA3PCJ	9,648	30	7	48	85	18 *
VE7BQO	6,880	28	4	35	67	16 *
VA2SG	5,338	22	2	27	51	17 *
WB0IWG	5,220	37	6	16	59	10 *
KE0G	4,972	32	2	46	80	11 *
VE6BHO	3,744	21	2	19	42	13 *
VE6ZC	3,744	21	4	11	36	12 *
VE3CQH	2,794	14	2	37	53	11 *
VA2NB	1,944	14	2	18	34	9 *

SINGLE OP ALL BANDS SSB ONLY (SOABPH)

Call	Score	CDN	RAC	DX	QSOs	Mult
VA6UK	90,936	256	12	284	552	27 **
VA7FC	56,836	159	11	188	358	26 *
VE3SY	54,270	144	11	175	330	27 *
VE3WBT	41,580	102	15	110	227	27 *
VA3OK	38,304	184	11	167	362	16 *
VA3MTT	35,856	93	9	192	294	24 *
K5DHY	34,224	114	13	44	171	23 *
VA6RF	29,040	84	12	65	161	24 *
VA3YP	27,350	80	12	27	119	25 *
VE1ZD	26,448	155	9	237	401	12 *
VE3SWS	18,814	47	11	64	122	23 *
VA6AK	17,120	59	10	33	102	20 *
VE7NS	15,928	51	8	27	86	22 *
VE5DLM	15,770	51	11	50	112	19 *
YO3CZW	14,388	90	0	204	294	11 *
W4SVO	13,702	92	2	47	141	13 *
VE4SBS	13,272	65	6	168	239	12 *
VE6QO	12,312	45	8	37	90	18 *
VE6KG	11,514	35	11	18	64	19 *
VE3ZUO	10,320	32	8	18	58	20 *
VE7WWW	10,108	36	7	16	59	19 *
K7XE	9,380	47	10	0	57	14 *
K7XE	9,380	47	10	0	57	14 *
VE3AD	9,252	24	11	27	62	18 *
W9QL	9,000	55	6	40	101	12 *
VA3GKO	8,760	47	2	37	86	15 *
VE8GER	7,920	52	4	30	86	12 *
VA2BS	7,884	27	6	24	57	18 *
VA3GD	7,280	37	3	45	85	14 *
VE7VAW	6,318	28	8	23	59	13 *
VA3TPV	6,300	30	6	15	51	14 *
VE6PLC	5,980	28	7	20	55	13 *
VE9LMN	5,376	34	4	14	52	12 *
VA7AQD	5,160	27	2	17	46	15 *
VA7XN	5,104	30	7	12	49	11 *
NA2NY	4,632	25	5	18	48	12 *
VA2CO	4,422	31	3	16	50	11 *
VE7RSV	4,296	21	6	14	41	12 *
VE9REB	4,026	20	7	13	40	11 *
VE4TCH	3,984	18	6	16	40	12 *
VE7IR	3,850	19	6	20	45	11 *
AG6AY	3,784	22	5	12	39	11 *
VA3KHH	3,680	25	4	19	48	10 *
PA1NHZ	3,618	32	1	31	64	9 *
VE9PLS	3,460	26	2	23	51	10 *
VE2PDT	3,366	22	3	13	38	11 *
VE3NQM	3,360	18	5	0	23	12 *

VE3TLY	2,900	19	4	10	33	10			IK0GDG	5,520	25	2	131	158	10	*	
KF0F	2,880	26	5	0	31	8	*		N5ZO	5,016	29	5	33	67	11	*	
KE5ISO	2,808	19	5	11	35	9	*		KE2D	5,012	23	1	54	78	14		
VE2HAY	2,720	20	2	16	38	10			K2NV	4,730	22	3	75	100	11		
PY5FO	2,628	20	4	6	30	9	*		WC7Q	4,708	28	3	44	75	11		
KF5KHS	2,620	17	4	6	27	10			YO2GL	4,620	24	2	70	96	11		
OH6ECM	2,192	21	1	22	44	8	*		NW0M	4,360	28	4	38	70	10		
VE3SVQ	2,128	17	3	18	38	8			W0GXA	4,120	30	4	16	50	10		
KB1REQ	1,900	16	1	5	22	10			AF0E	4,080	16	4	50	70	12		
KD0FW	1,890	19	3	10	32	7			K6CSL	3,984	21	2	41	64	12		
VE2ER	1,890	18	2	25	45	7			EA8DA	3,924	23	2	83	108	9	*	
VA3EEB	1,818	13	3	6	22	9			OK2QX	3,880	19	3	69	91	10	*	
K7KFB	1,680	12	4	5	21	8	*		KI0I	3,864	25	3	6	34	12		
CO2VE	1,616	12	3	11	26	8	*		K2MK	3,520	30	1	0	31	11		
VA3DBT	1,536	11	3	11	25	8			YO9AGI	2,960	15	1	63	79	10		
ZX5ZZ	1,400	11	3	15	29	7			S51DX	2,790	14	1	75	90	9	*	
AE2NG	1,260	10	3	10	23	7			VA3RJ	2,740	13	5	22	40	10		
VA3IDL	1,140	9	4	10	23	6			HA2MN	2,624	18	1	64	83	8	*	
VE3OXX	1,050	12	1	5	18	7			AB3LS	2,224	15	1	54	70	8		
K6BSD	880	7	2	0	9	8			VA3FN	2,220	13	2	26	41	10		
VE6DKC	580	6	2	8	16	5			AB9CA	2,200	18	2	0	20	10		
W7KAM	500	6	2	0	8	5			VE3KQN	1,876	13	2	49	64	7		
N6ENO	496	8	2	2	12	4			K6DGW	1,848	19	1	27	47	7		
orK7JKM	480	5	2	3	10	5			VE3/K2NV	1,840	12	1	45	58	8		
KB1VUN	450	7	1	0	8	5			SP9GR	1,788	9	1	94	104	6	*	
N8ZKT	384	5	2	3	10	4	*		WG7Y	1,712	13	2	22	37	8		
VE2DRO	340	4	1	4	9	5			NS9I	1,584	10	2	18	30	9		
VE3RKS	336	4	2	2	8	4			UT3EK	1,476	10	0	73	83	6	*	
WC8Z	240	3	1	5	9	4			HA1TI	1,430	10	1	83	94	5		
VA3NW	100	5	0	0	5	2			KE2VB	1,344	15	0	21	36	7		
AC2HJ	14	0	0	7	7	1			G3LIK	1,320	10	2	40	52	6	*	
KC9UHH	4	0	0	2	2	1			JG3CQJ	1,272	11	2	31	44	6	*	
SINGLE OP ALL BANDS CW ONLY (SOABCW)									YO4SI	1,260	9	2	40	51	6		
Call	Score	CDN	RAC	DX	QSOs	Mult			W6GMT	1,050	10	4	15	29	5		
VE7JH	181,440	256	20	680	956	42	**		N2UU	1,020	13	2	0	15	6		
K4LTA	122,430	245	17	354	616	35	*		DL7BY	438	8	1	23	32	3	*	
VE7XF	113,334	179	16	398	593	39	*		SM5CSS	354	5	1	24	30	3	*	
N6MA	91,938	185	17	298	500	33	*		YO3GNF	348	6	0	57	63	2		
N4BP	86,912	211	12	377	600	28	*		PA4N	318	5	1	18	24	3	*	
VE6BMX	84,116	153	12	352	517	34	*		DL8UAT	280	5	1	0	6	4		
VE1RGB	78,996	174	10	392	576	29	*		VE7GM	264	4	2	4	10	3		
VE3USP	77,532	116	15	264	395	39	*		KB3SJQ	236	5	2	14	21	2		
W9RE	73,150	152	7	215	374	35	*		DK0SU	216	5	0	11	16	3		
VA7ST	61,432	126	14	327	467	28			KC8UR	132	2	1	2	5	3		
W6RLL	61,260	136	15	191	342	30			OK2SWD	132	3	0	7	10	3		
K2ZR	44,224	84	9	181	274	32	*		DL3ZAI	74	0	1	27	28	1		
VE4AEO	43,420	100	14	195	309	26	*		JA3JM	72	1	1	3	5	2		
K4ORD	43,004	115	10	152	277	26			PA5GU	72	0	1	26	27	1		
N8BJQ	39,232	76	9	143	228	32	*		JA2CUS	60	2	0	5	7	2		
N4ZZ	38,732	126	6	152	284	23			5B/HA5SE	46	2	0	13	15	1	*	
K5LG	37,248	111	11	111	233	24	*		ON3ND	36	0	0	18	18	1	*	
K7WP	36,048	105	9	136	250	24			N5PO	12	0	0	6	6	1		
W4YE	35,050	95	9	136	240	25			SINGLE OP SINGLE BAND (SOSB)								
VE7JKZ	30,272	86	9	168	263	22			BAND BY BAND BREAKDOWN								
VA3ATT	25,532	66	5	111	182	26			Call	Score	CDN	RAC	DX	QSOs	Mult	Band	Pwr
VE3MM	23,584	58	9	156	223	22			VA3PEN	3,654	25	4	38	67	9	15M	HP*
NA4K	21,672	75	6	81	162	21			VA3JWR	246	4	2	1	7	3	15M	LP
KN4Y	17,176	70	8	22	100	19			YO8BFC	54	1	0	22	23	1	15M	HP
VE3XAT	16,986	49	9	112	170	19			W4IX	127,380	430	15	595	1040	22	20M	HP*
WB8JUI	15,770	54	6	85	145	19			VE3KZ	109,250	326	13	615	954	23	20M	HP
VE3FH	15,640	41	8	106	155	20			9A3B	57,596	178	7	349	534	22	20M	HP
KU8E	14,212	54	2	128	184	17			HC2AO	34,542	125	6	224	355	19	20M	HP
N5KWN	13,620	62	5	94	161	15			NF8J	26,068	107	8	71	186	19	20M	LP
W4NZ	13,464	52	6	54	112	18			UA1AFT	24,880	83	8	127	218	20	20M	HP*
K8MP	12,840	57	2	123	182	15			9A287R	23,674	84	5	153	242	19	20M	HP
W1QK	12,488	55	5	121	181	14	*		VE5FX	21,582	173	5	66	244	11	20M	HP
VE3LC	12,240	39	2	91	132	20			VO2NS	18,180	163	5	145	313	9	20M	HP
VE3FJ	12,128	44	7	89	140	16			VA7JW	16,866	143	4	182	329	9	20M	HP
VY2SS	11,228	50	2	131	183	14	*		VO1QU	16,640	77	6	195	278	13	20M	LP
W3DQN	10,470	42	6	79	127	15	*		RA3Y	16,150	57	4	150	211	17	20M	HP
VE3KAO	10,080	35	8	60	103	16			VE3HG	13,176	49	7	51	107	18	20M	QRP
NA4C	9,570	39	7	54	100	15			VE1AYY	11,250	65	5	250	320	9	20M	LOW
VE4SN	9,452	40	6	18	64	17			SQ2PHG	10,848	74	4	42	120	12	20M	HP*
W5JBO	9,420	40	6	54	100	15			VA3ATW	10,344	60	5	81	146	12	20M	LP
NM5M	9,324	42	5	73	120	14			ND2T	9,268	52	2	51	105	14	20M	HP
W5LA	9,216	42	3	48	93	16			VE9AA	8,688	41	3	127	171	12	20M	HP
K5ME	8,640	46	4	0	50	16			VE3CV	7,896	37	4	57	98	14	20M	LP
W7GB	8,416	42	5	3	50	16			VA3GUY	7,480	58	5	34	97	10	20M	LP
KD8SAV	8,148	38	4	61	103	14			UT7CA	7,368	39	1	102	142	12	20M	HP
K3HX	8,032	29	4	66	99	16			TG1B	6,974	37	2	112	151	11	20M	LP
K5YQF	7,840	37	6	0	43	16			W6AFA	6,500	7	0	290	297	10	20M	HP
VA2WA	7,808	27	0	109	136	16	*		K7JQ	6,288	35	5	37	77	12	20M	HP
KB7N	7,700	34	4	65	103	14			VE1SQ	5,598	46	5	31	82	9	20M	LP
W5ASP	7,084	43	5	57	105	11			VE3EY	4,248	29	2	71	102	9	20M	LP
UA2FL	6,732	44	1	144	189	9	*		VA3RSX	3,652	23	4	11	38	11	20M	Any
KD2MX	6,660	27	3	57	87	15			VE1JS	3,504	44	3	42	89	6	20M	HP
YO3ND	6,622	35	2	106	143	11	*										

CX2DK	2,416	18	4	21	43	8	20M	HP	*
HA3OD	2,408	17	2	67	86	7	20M	HP	*
AE1T	2,380	13	3	24	40	10	20M	LP	*
SP1RKT	2,286	16	3	17	36	9	20M	HP	*
VA4CQD	2,208	20	2	18	40	8	20M	QRP	*
VE7NI	2,120	13	1	31	45	10	20M	LP	*
W0PAN	2,064	24	4	12	40	6	20M	LP	*
VE7PKE	1,792	17	3	13	33	7	20M	LP	*
HA3MU	1,728	14	1	64	79	6	20M	LP	*
VE3SS	1,620	19	3	10	32	6	20M	HP	*
AC0UK	1,568	16	2	12	30	7	20M	HP*	*
RA3NC	1,500	10	2	55	67	6	20M	HP	*
N5RZ	1,416	15	1	33	49	6	20M	LP	*
UT5UIA	1,404	10	3	37	50	6	20M	LP	*
K9OSC	1,380	19	2	0	21	6	20M	QRP	*
DL1CW	1,330	11	2	58	71	5	20M	LP	*
VA2UTC	1,232	10	1	17	28	8	20M	LP	*
TF3DC	1,200	19	0	25	44	5	20M	LP	*
WB3CII	1,008	9	1	17	27	7	20M	LP	*
VE5BCS	980	14	2	8	24	5	20M	LP	*
RA1TV	940	6	0	64	70	5	20M	LP	*
N9FN/M	924	9	2	1	12	7	20M	LP	*
VE2/KD2JA	890	12	2	9	23	5	20M	LP	*
OH5TS	810	10	0	31	41	5	20M	LP	*
VE5AAD	648	12	1	11	24	4	20M	ANY	*
VE5WD	530	6	2	3	11	5	20M	LP	*
HC1JQ	510	7	1	6	14	5	20M	HP	*
NOLVA	500	8	1	0	9	5	20M	LP	*
VA7IR	496	8	1	12	21	4	20M	QRP	*
UA4L	480	10	1	20	31	3	20M	HP	*
VE2PIJ	470	6	1	7	14	5	20M	HP*	*
RO5O	380	5	0	13	18	5	20M	LP	*
L33M	344	6	0	13	19	4	20M	LP	*
YO4RHK	336	3	0	69	72	2	20M	LP	*
VE2HLS	306	6	0	21	27	3	20M	LP	*
N9BT	304	4	1	8	13	4	20M	QRP	*
DL5KUR	300	8	1	0	9	3	20M	LP	*
AL1G	282	8	0	7	15	3	20M	HP	*
NOICV/9	280	3	2	0	5	4	20M	LP	*
KJ6MBW	280	3	2	0	5	4	20M	HP	*
VE3EDX	210	3	1	10	14	3	20M	QRP	*
RW3AI	208	3	0	37	40	2	20M	LP	*
UA8WAA	198	5	0	8	13	3	20M	HP	*
KJ4VTH	190	15	2	0	17	1	20M	LP	*
PAOMIR	152	3	0	23	26	2	20M	LP	*
W7SLS	132	2	1	2	5	3	20M	LP	*
OH1TD	132	3	0	7	10	3	20M	HP	*
NI4NN	120	2	1	0	3	3	20M	LP	*
RW1CW	120	5	0	5	10	2	20M	HP	*
VA7MM	104	4	0	6	10	2	20M	QRP	*
VK4TT	88	2	0	12	14	2	20M	LP	*
EW8OF	84	3	0	6	9	2	20M	LP	*
UR6LAF	76	0	1	28	29	1	20M	LP	*
VE3NLE	72	1	1	3	5	2	20M	LP	*
4Z5PJ	72	2	0	8	10	2	20M	LP	*
AD1L	60	3	0	0	3	2	20M	LP	*
VE5DL	58	3	1	4	8	1	20M	LP	*
SP3AZO	42	3	0	6	9	1	20M	LP	*
CT2JBG	38	3	0	4	7	1	20M	QRP	*
DU1XX	20	0	1	0	1	1	20M	LP	*
ES8SX	14	0	0	7	7	1	20M	LP	*
OK2BEN	14	1	0	2	3	1	20M	HP	*
AA7CU	12	1	0	1	2	1	20M	HP*	*
OZ7DK	12	0	0	6	6	1	20M	LP	*
VE2FXL	10	1	0	0	1	1	20M	HP	*
JL2OGZ/2	10	1	0	0	1	1	20M	LP	*
LZ2FM	8	0	0	4	4	1	20M	LP	*
U1BD	4	0	0	2	2	1	20M	HP	*
F4GFT	2	0	0	1	1	1	20M	LP	*
EA8CNR	2	0	0	1	1	1	20M	LP	*
VA3KUG	31,616	126	6	298	430	16	40M	LP	*
K9WX	11,760	64	7	100	171	12	40M	LP	*
VE3NZ	11,180	66	2	209	277	10	40M	HP	*
W8IQ	9,268	44	5	61	110	14	40M	QRP	*
VE3SB	4,080	22	3	30	55	12	40M	LP	*
VE3PYJ	2,502	16	4	19	39	9	40M	LP	*
KB6NU	1,032	18	0	39	57	4	40M	LP	*
W6RKC	820	12	0	22	34	5	40M	HP	*
KE7FQJ	192	2	2	2	6	3	40M	HP*	*
BA4TB	26	0	1	3	4	1	40M	LP	*
K9FH	20	0	1	0	1	1	40M	HP	*
YO2MJZ	4	0	0	2	2	1	40M	HP*	*
VE9RLW	5,340	42	5	7	54	10	80M	LP	*
VE3OSZ	1,932	22	1	41	64	6	80M	LP	*
N6RO	798	8	1	7	16	7	160M	HP	*

FEEDBACK: Letter Addressing (How to help the QSL Bureau)

As a long-time volunteer with the Incoming QSL Bureau I find it is quite apparent that few Amateurs (and some others too for that matter) know how to properly address an envelope or an address label. A perusal of the first few pages of the code book at any Post Office outlet will show exactly how the PO wants an address made. Also <http://www.canadapost.ca/addressing> gives essentially the same information only with more detail.

The reason for all this is that the automatic sorting machines are designed to accept a certain format. The envelope zips through when it sees what it wants to see otherwise there could be a needless delay. Seemingly correct label addressed envelopes containing QSLs have been returned. When readdressed with the proper format the envelope gets through. All this should be considered to eliminate delay of your QSL cards.

Pat Lacey, VE3DIT – Kitchener, Ontario

MULTI OPERATOR SINGLE TRANSMITTER HIGH POWER (MOSTHP)

Call	Score	CDN	RAC	DX	QSOs	Mult	
VE9HF	253,368	331	19	501	851	54	**
VE1LD	223,110	375	20	404	799	45	*
N2BJ	217,098	252	28	183	463	63	*
WA2BCK	150,300	224	16	223	463	50	*
N4DW	102,712	194	13	288	495	37	
VE7BFC	93,438	243	14	256	513	29	*
N5CW	40,480	118	7	220	345	23	*
WB0TEV	33,744	140	10	88	238	19	
W1UJ	31,504	85	8	211	304	22	*
VE3VZ	27,236	92	11	49	152	22	*
N4AF	17,856	68	7	86	161	18	
G3ORY	13,244	59	6	118	183	14	*
K1SD	9,180	33	8	10	51	18	
PI4DX	8,512	34	3	66	103	16	*
K4IU	5,124	23	4	28	55	14	*
W4VIC	4,000	32	4	0	36	10	
VE3SSR	3,260	18	2	53	73	10	
N3QE	3,096	17	4	4	25	12	*
NK6A	3,060	19	4	18	41	10	*
N2NS	2,860	19	2	15	36	11	
S59T	360	5	0	35	40	3	*
WA3AAN	280	4	1	5	10	4	

MULTI OPERATOR SINGLE TRANSMITTER LOW POWER (MOSTLP)

Call	Score	CDN	RAC	DX	QSOs	Mult	
VE9ML	432,864	430	33	526	989	72	**
VE3MIS	337,172	270	32	464	766	79	*
VA7BEC	203,262	243	23	338	604	57	*
VE4EA	131,700	157	31	222	410	50	*
VE5RAC	113,692	166	20	292	478	43	*
VA3KAI	97,760	131	14	145	290	52	
VE9OA	67,394	151	13	202	366	31	
VE7NA	29,176	59	16	66	141	28	
K0PY	25,104	75	11	38	124	24	*
VE3JDF	16,650	45	9	18	72	25	
K5MXG	14,352	38	8	42	88	23	*
VE3VV	13,938	32	12	23	67	23	
VE3HEU	10,290	52	2	63	117	15	
N4AAI	6,838	37	2	58	97	13	*
WK2T	6,552	31	2	77	110	13	*
VE3AKJ	5,880	23	8	15	46	14	
YU1FG	3,660	19	1	78	98	10	*
VA3JLF	2,760	13	4	10	27	12	
N3NZ	1,856	16	2	16	34	8	*
N3UA	1,792	16	2	12	30	8	
SP1MHZ	1,240	17	1	29	47	5	*

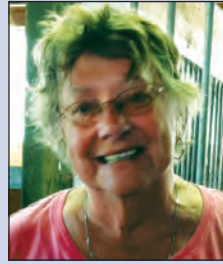
MULTI OPERATOR MULTIPLE TRANSMITTER (MOMT)

Call	Score	CDN	RAC	DX	QSOs	Mult	
VA3RAC	782,130	562	31	1085	1678	93	**
VE6SV	779,940	571	47	1008	1626	90	*
VE7RAC	435,774	508	27	883	1418	59	*
VE6RAC	366,230	538	16	605	1159	53	
VE5RI	220,992	348	18	382	748	48	*
VE3DC	213,174	415	17	488	920	39	
VE6AO	198,326	200	17	701	918	53	
VA2RAC	187,044	381	11	383	775	39	*
VE7NSR	19,458	51	10	68	129	23	
VE9RAC	6,384	33	6	41	80	12	*
VA2BCA	1,148	10	2	12	24	7	*

PUBLIC SERVICE / ARES

ARES: AMATEUR RADIO EMERGENCY SERVICES

It was with great regret I learned that Doug Mercer, VO1DTM, had taken the decision not to renew his term of office as Chief of Field Services. I know that Doug has new and exciting components in his life but he leaves huge shoes to fill. On behalf of all Amateurs, I want to wish Doug well in his future endeavours and to thank him for the hours and hours of tireless effort you gave to RAC. Your legacy will not soon be forgotten.



As I write this Groundhog Day has come and gone and left us with the forecast of another six weeks of winter. Although I would like to whine about the weather, when I look at this issue's column, it is easy to see that colder than usual temperatures have done nothing to dampen the enthusiasm of Amateurs to provide communications during times of difficulty or in support of local activities.

BC Amateurs province-wide came together to provide an excellent response for a Simulated Emergency Test and have made recommendations from lessons learned to ensure that the next exercise will have an even more professional response.

Remember Field Day is just around the corner and there are plans to make to ensure a good time by everyone and for good point scores for the competitive groups. In spite of the hairy rodents, spring will come sooner or later.

Pat Barrett, VE3RNH – National Amateur Radio Emergency Database Manager

BC/YUKON SIMULATED EMERGENCY TEST

*Submitted by Fred Orsetti, VE7IO
Section Emergency Coordinator
ARES Field Services*

All Amateur Radio clubs and emergency groups were invited to participate in a simulated emergency test (SET). Announcements were made on the BC Public Service Net, the BC Yukon Traffic Net as well as on several VHF nets one month in advance of the exercise. In addition all groups that had participated in previous SET exercises were invited to participate.

The primary goal of this exercise was to increase the proficiency, speed and accuracy of our operators when passing traffic using the National Traffic System (NTS). The exercise commenced at 09:00 local time then ran until approximately 14:00 and consisted of four tasks.

TASK ONE (Round Robin Relay):

Stations were asked to format two NTS messages addressed to themselves, with full address and phone numbers. The message text must start with the phrase "test message". The remaining portion of the NTS message was from text supplied from the participating station. The message text could have been emergency related or famous quotes. All stations were reminded to keep messages as brief and as simple as possible.

In addition to formatting messages and placing them into the "round robin circuit" stations were responsible for coordinating the reception of messages coming from the station before them.

All sending and receiving was coordinated through a net control station.

The purpose of the Round Robin Relay was to evaluate the entire group's ability to put two NTS messages out onto the circuit and receive them all back at the end of the day error free.

TASK TWO (NTS Third Party Message) performed simultaneously with Task #1

Each station was to send an ARL NTS third party message. Each message required a phone number in order that the receiving station would be able to deliver the message.

The station delivering the message was directed to send confirmation of delivery back to the originating station.

The third party message was sent directly to the delivering station (the station to make the phone call) and was not part of the "round robin messages".

Guidelines for the Third Party Message:

1) All stations were asked to have a copy of the ARL Numbered Text Messages at their station.

2) Handling instructions for the third party message should be HXC. The confirmation of message delivery should be done with the ARL 47 Numbered Text.

3) All messages should have the word "test" in the precedence and at the start and finish of the text.

TASK THREE (To be executed by Net Control):

In this part of the exercise all field stations were asked to cease passing traffic through the round robin and send all pending traffic back to the originating stations.

TASK FOUR (Post Event Analysis/Scoring):

Each station was asked to report to net control with the following information:

- 1) Are you using emergency power?
- 2) Confirm if your third party traffic was delivered and whether or not you got confirmation of delivery.
- 3) Number of messages originated.
- 4) Number of messages relayed.
- 5) Number of messages received back without error.
- 6) Number of messages received back with error(s).

There were some operational issues that need to be addressed for the next exercise to be scheduled in March.

For stations outside the Metro Vancouver area the use of HF clearly worked best. We did use IRLP and Winlink; both of these modes rely on the Internet and are less than desirable when considering emergency communications.

Both IRLP and Winlink worked very well but for future SET exercises we plan to minimize or eliminate the use of the Internet. Peer-to-Peer digital seems to be the best option, however to accomplish this HF may be a requirement.

In summary, the exercise did what exercises are supposed to do and that is provide an opportunity to evaluate our ability to deliver on commitments made to the Province and the Community by Amateur Radio emergency organizations. Most certainly the SET at the end of November did just that and everyone is encouraged to participate in the March SET.

73, Fred Orsetti, VE7IO

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LOYALIST DISTRICT ICE STORM 2014 Much activity, some blackouts and busy nets...

*Loyalist ARES District Groups Report
Submitted by Bill Nangle, VE3CLQ, on
behalf of the Frontenac EmComm Group*

The Frontenac EmComm Group in Eastern Ontario reports that they received up to three centimetres of ice in the Kingston and Frontenac area over a two-day period. Many power lines were down as well as phone, cable and Internet connections. Ron Walsh, VE3GO, ran a marathon CanWarn net keeping everyone informed of weather, power outages and the latest road conditions.

Mark Podgers, VE3EOG, spent two days at the County Emergency Operation Centre making sure the information was flowing to the group members at large. Fortunately things never got bad enough in Frontenac County for the Frontenac EmComm group to be deployed. The worst of the weather stayed well south of us, and the northern areas of Frontenac County got away with very little damage.

The group did lose power to their main repeater, VE3FRG, and to the VE3FRG-7 Digital Node, for a short while on Sunday morning. Luckily for the group it was just a small local outage, not a major problem. All traffic switched seamlessly to the VE3KBR repeater in Kingston and some stations were tasked to monitor 146.520. The group routed digital traffic through the VE3FPN-7 node, which is located further north of Kingston at the Sydenham fire hall. Once power was restored to VE3FRG, the net was moved back onto that repeater and the listening watch on 146.520 was reduced to one station.

OPÉRATION CITROUILLE / GOBLIN PATROL



SEC Normand Pitre, VE2NHK

À noter : Dans le TCA de janvier - février 2014 (page 48), la photo ci-dessus a été attribuée par erreur à Goblin Patrol de St-Eustache, Québec.

OPÉRATION CITROUILLE DU RADIO CLUB DE SAINT JEAN

Le 31 octobre dernier, un groupe de radioamateurs du radio club de Saint Jean, sous la direction de Jean-Guy, VE2AIK, ont prêté main-forte à la police de l'agglomération de Longueuil pour assurer la sécurité dans les rues de Saint Bruno de Montarville.

L'opération fut un succès complet et a duré entre 4h30 jusqu'à 8h30. Douze radioamateurs ont participé à cette opération. Les amateurs suivants étaient présents: Luc, VA2DLJ, Jean-Guy, VE2AIK, Michel, VE2DJN, Serge, VE2DEQ, Dominique, VE2DNK, Yvon, VE2EHN*, Denis, VE2NY*, Pierre, VE2PBA, Marius, VE2PCN*, Gervais, VE2PES, Stéphane, VE2XSM* et Christian, VE2CFO.

Marqués par une étoile, les amateurs présents étaient accompagnés de leur épouse.

GOBLIN PATROL OF SAINT-JEAN AMATEUR RADIO CLUB

Note: In the January-February 2014 TCA (page 48), the above photo was incorrectly attributed to the Goblin Patrol in Saint-Eustache, Quebec.

On October 31, a group of Amateurs from the Saint-Jean Amateur Radio Club in Montreal, under the supervision of Jean-Guy, VE2AIK, gave a helping hand to the local police to ensure safety in the streets of Saint Bruno de Montarville.

The event was a complete success and lasted from 4:30 pm until 8:30 pm. Twelve Amateurs participated in the operation. Amateurs who were present were: Luc, VA2DLJ, Jean-Guy, VE2AIK, Michel, VE2DJN, Serge, VE2DEQ, Dominique, VE2DNK, Yvon, VE2EHN*, Denis, VE2NY*, Pierre, VE2PBA, Marius, VE2PCN*, Gervais, VE2PES, Stéphane, VE2XSM* and Christian, VE2CFO,

*Note: Call signs with an * indicated that a spouse was present.*

The EmComm group reports that Prince Edward County was without power for several days, with tree branches taking down the power lines in several locations. The ARES net was run on the VE3TJU repeater in Picton. Bill Milligan, VA3WOW, in Belleville, was heard from and all seemed to be under control there.

To the south of Kingston across the border the Jefferson County ARES/RACES was activated and a liaison station was set up with them. Their main repeater, AC2GE, in Dexter, New York, went off the air with antenna failure due to ice build-up, and they managed to switch seamlessly to the KA2QJO repeater in Watertown, New York, with the VE3FRG repeater now becoming their backup in case of further failures.

Our American friends got it much worse than we did in Kingston and area.

While everyone's main concern was the safety of family and property, the VE3FRG repeater stayed very active with over 25 stations calling in to state their availability and readiness. It is pretty amazing given the time of year and the fact that some people were still at work.

At the time of writing, things are slowly getting back to normal here. The members are praying for a good thaw to get rid of the ice build-up. The Frontenac EmComm group's Go-Kits have all been put away and antennas are still inches thick with ice, most of their beams and dipoles are drooping very sadly, but they are still all on the air.



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THE SPORTS PAGE

— THE CANADIAN CONTEST SCENE

WRTC-2014: Congratulations to the Canadian participants in WRTC-2014. Competitors include VE7CC, VE7SV, VY2ZM, VE3EJ and VE3DZ plus Onsite Referees VA2WA, VE3EY, VE3RA and VE3XB. The Canadian Contest community will be well represented!

This month I am pleased to include the following comments from Derek, VE7RE. Thanks for this Derek. Lots of food for thought!

– 73, Bob, VE3KZ

POOR AMATEUR RADIO OPERATIONS

SPORTS PAGE INFO:

The contest results provided in this column are courtesy of the Maritime Contest Club team:

Gary Bartlett, VE1RGB
 Scott Nichols, VE1OP

For more contest information check out these sites:

<http://www.hornucopia.com/contestcal/weeklycont.html>

<http://www.contesting.com>

<http://www.sk3bg.se/contest/>

<http://www.arrl.org/contests/calendar.html>

<http://www.arrl.org/contests/rate-sheet/about.html>

<http://www.cq-amateur-radio.com/awards.html>

The "Contest Calendar" at the end of this column is presented as a guide only.

RAC and TCA do not necessarily endorse or support any of the contests or the accuracy of the information.

Bands: The 30, 17 and 12m bands are never used in any contest.

Derek Bailey, VE7RE

I know this has been discussed countless times in the past but I can't help but comment about the operations during, but not exclusive to the large contest that took place on October 26 and 27 last year.

Now don't get me wrong, I took part in the contest myself and I am a fan of contesting. In fact I think it's great fun and an excellent opportunity to compete with fellow operators around the world not to mention actually really utilize the bands we are all so privileged to get to use. However, it is amazing to me that all good manners seem to go out the window because of a "friendly" competition where there is nothing really to win except bragging rights.

There are a lot of excellent operators and I think they are the norm and not the exception, but the following is what I observed that is most disappointing.

1) Calling operators not respecting the fact that others still want to carry on a ragchew or scheduled net on the frequency that "they", not you already occupy.

I get it. This may be an occupational hazard of doing this during a big contest, but c'mon guys, have some common decency. This is supposed to be a gentleman's hobby and isn't it best to show courtesy. One day it may be you needing that same courtesy, so let's be mindful.

2) Operators calling and calling the station even when the station is already working someone.

Again, I know this has been discussed, but for crying out loud, how the heck do you expect to work a station if you can't even hear them – because if you did hear them, you would know they are already working someone.

At that point "you are not" another station calling, you "are" the source of interference on the frequency that's making it difficult for them to work.

3) Stations, especially the big contest stations (you know who you are) that are working on a frequency not giving their call signs and just calling "QRZ" in between contacts.

It seems these operators are so fixated on working as many contacts as possible that they don't give their call. Calling stations wait a long time to hear their call sign, sometimes only to realize they have already worked you. What a waste of their time. Thank you for that! Really, it forces calling stations to work you and withhold their exchange to request your call sign for the log. Now isn't that just a waste of your time?

Please give your call sign at least every two or three contacts so calling stations know who you are. Isn't that the whole point?

4) Calling stations repeating your full call when the receiving station is only asking for prefix, suffix or number only.

For example, If I give my call, VE7RE ("Victor Echo Seven Romeo Echo") and a receiving station says "ending in Romeo Echo". Don't repeat your whole call, just give them the "Victor Echo Seven". They already have the letters they replied back to you and in a lot of cases repeating your whole call over and over just confuses people.

Remember, band conditions are not always favourable, QRM, QRN and there are different inflections in our own voices due to a multitude of different nationalities. Unless they ask for your full call, don't keep re-sending and re-sending your call sign. It makes it difficult to complete the QSO.

5) Improper use of phonetics.

Now this is just a personal aggravation I have, but we should show some level of competency here. We always hear the grumbling of the electronically Elite discussing how they should make exams harder not easier.

Well, there is a good discussion on both sides of that one, but I prefer to see people strive to be good operators.

Part of being a good operator is using proper phonetics. There is nothing worse in my opinion than to hear "London, Sugar, Mexico" when it should be "Lima, Sierra, Mike".

Phonetics were designed so we are all talking the same language and expect to hear such in order to "help" us communicate effectively.

OK, if you need to change one here or there for the sake of getting a good copy on the other end, sure why not, but use proper phonetics whenever possible. Not doing so is just sloppy operation in my opinion and yes, I am opinionated (grin).

6) Operators tuning up on the air.

Seriously, this should not be happening.

Most operators have spent thousands of dollars. In fact a lot have spent tens of thousands of dollars on radios and equipment.

Do yourself and everyone else on the air a favour and invest a very small amount in a neat little device called a "Dummy Load" because if you don't, you look like a Dummy for tuning up on the air. It is a source of interference and aggravation for everyone else but you.

If you must tune on the air, give your call sign and let people know you are "testing" and then give your call sign again with "Test Complete" at the end. Once again, common courtesy.

7) Fast calling and voice keyers. Usually the two are synonymous.

Quite often voice keyers sound crappy over the air if they are not set up correctly or you are recording your call sign too fast. Take a minute to listen to them before going on the air or better yet, ask another station outside of contest time – like during a ragchew – how it sounds over the air. Are you sure others will be able to hear your call clearly and concisely?

Keyers are a great asset to have and use, but they are not doing you any good or saving you any time if the other station can't understand the call.

8) THIS IS THE BIG ONE. Set up your station for proper operation!

It seems many of the big guns and large multi-multi contest stations are guilty of this as well although it's not exclusive to them.

Just because you spend all that money on your station and its "Big Contest Time" does not mean that you should over drive

your amplifiers and set your exciters up in a fashion that is not conducive to the operation of that radio. Look in your study guides. Maximum bandwidth on HF with the exception of 30 metres and 10 metres is **6 kHz**.

Now this has nothing to do with stacked arrays with huge gain or band conditions etc that may cause splatter. This is purely operators not understanding the use of their equipment and turning everything up to full scale in the hopes of being louder. Your station will not sound good over the air at these levels and it makes it hard to understand you. It's disrespectful to others that are trying to use some of the 10 and 12 kHz of space that you occupy. It's also obnoxious and "Illegal".

All HF radios that I have owned explain proper set up and use for each mode in the operations manuals.

Do yourself and everyone a favour and take a few minutes to read it. You will only benefit from this and so will everyone else. Set your ALCs, Drives and processors accordingly. You may just find that a lot of those neighbour complaints of interference disappear as well. Big guns, force your operators to fully understand the operations before allowing them to operate your station.

OK, well it was not my intent to offend or lecture anyone, as I am not that smart but these are things that I personally observed during the last contest. Seeing as I have read all this many times, it would lead one to think that this kind of stuff shouldn't be happening so apparently it needs to be published again and again in the hopes that each time a few more will "get it".

Enjoy Amateur Radio and good contesting.



ERRATUM FROM JANUARY-FEBRUARY 2014 ISSUE OF TCA

NAQP SSB

Call	QSO	Mult	Score	Operators
VE6AO	1,152	178	205,056	VE6GDS, VE6TC
VE3MIS	838	154	129,052	VE3CWU, VE3IMG, VE3VE
VE7XY	180	52	9,360	VE7FI, VE7XY
VE7NA	122	69	8,418	VA7DGV, VA7DSW, VE7BGP, VE7GOA, VE7TWO
VE9BWK	15	12	180	VE9BWK

FLORIDA QSO PARTY 2013

Call	QSO	Mult	Score	Category	PWR
VE3RZ	414	116	165,416	MIXED	LOW
VE3KZ	516	67	136,278	CW	LOW
VE1RGB	349	67	91,924	CW	LOW
VE5KS	242	66	62,040	CW	LOW
VE9AA	325	94	54,426	MIXED-ASSISTED	HIGH
VE3CR	287	94	46,436	MIXED	HIGH
VE3OM	179	65	45,760	CW	LOW
VA3ATT	184	60	42,480	CW	LOW
VE4VT VE2EAR)	241	92	38,456	MIXED	HIGH
VE2AWR	160	66	37,620	MIXED	LOW
VE1OP	278	67	36,984	CW-ASSISTED	HIGH
VY2LI	261	98	36,554	MIXED	HIGH
VE3KAO	147	57	33,060	CW-ASSISTED	LOW
VA3DX	135	62	31,248	MIXED-ASSISTED	LOW
VE4YU	131	66	28,380	MIXED	LOW
VE7CV	111	62	23,560	MIXED	LOW
VE3CX	150	72	18,792	MIXED-ASSISTED	HIGH
VE3HG	72	45	15,255	MIXED	QRP
VE3MGY	58	35	11,340	CW	QRP
VE7IO	111	50	10,700	CW-ASSISTED	HIGH
VE3XD	53	32	10,176	CW-ASSISTED	QRP
VE1BVD	99	46	8,924	SSB-ASSISTED	LOW
VA3WPV	63	37	6,882	SSB	QRP
VE7CVA	46	36	5,544	MULTI-SINGLE-MIXED	LOW
VA3EC	38	29	3,422	MIXED	LOW
VE3RCN	38	31	3,410	MIXED	LOW
VA3FN	32	27	3,348	CW	LOW
VA3GKO	48	29	2,320	SSB-ASSISTED	LOW
VE9OA	27	22	1,364	MIXED-ASSISTED	LOW
VE5BCS	29	20	1,000	MIXED	LOW
VE3EXW	18	15	990	MIXED-ASSISTED	LOW
VE3HED	20	17	680	SSB	LOW
VA2UTC	23	16	672	SSB	LOW
VE3MCF	20	13	468	SSB	LOW
VE2GGY	7	7	196	CW	LOW
VE6BMX	5	5	135	MIXED	QRP

ARRL INTERNATIONAL DX CONTEST – SSB – 2013

Call	QSO	Mult	Score	Class
VY2ZM	3,949	480	5,640,480	SOAB HP
VE3EJ	3,799	468	5,314,140	SOAB HP
VB3E (VE3AT)	3,687	463	5,105,964	SOAB HP
VY2TT (K6LA)	3,505	419	4,374,360	SOAB HP
VE2NGH	1,285	325	1,244,100	M/S HP
VA2AM	1,161	350	1,192,800	SOAB(A) HP
VO1KVT	1,421	269	1,137,063	SOAB(A) HP
VE3MMQ	1,056	354	1,106,604	SOAB(A) HP
VE4VT (VE4EAR)	971	272	787,440	SOAB(A) HP
VE9ML	700	271	567,474	SOAB(A) LP
VE3NB	698	269	556,830	SOAB LP
VE3BR	652	262	507,756	SOAB LP
VA3ZDX	662	261	505,818	SOAB HP
VE3AD	755	211	466,521	SOAB HP
VE3RA	538	248	398,040	SOAB(A) HP
VE3RZ	530	252	396,900	SOAB(A) HP
VE3XAT	435	265	341,055	SOAB(A) HP
VE1ZD	537	211	335,490	SOAB(A) LP
VE3KZ	1,087	100	322,500	SO15
VA3WU	520	210	318,150	SOAB(A) LP
VA3DX	597	165	293,535	SOAB(A) HP
VA7BEC	496	194	283,434	SOAB(A) LP
VE9OA	580	163	281,664	SOAB LP
VA3YP	962	95	272,745	SOAB(A) HP
VE3IAE	463	191	259,569	SOAB(A) LP
VE6EX	501	163	240,588	SOAB LP
VE5ZX	414	185	226,995	SOAB(A) HP
VE3ZZ	364	205	223,860	SOAB(A) HP
VA2WA (VA2WDQ)	498	146	216,372	SOAB(A) LP
VE5MX	429	161	206,724	SOAB(A) HP
VO1DJT	493	139	202,245	SOAB(A) LP
VO1TA	576	118	201,426	SOAB(A) LP
VE4YU	379	160	181,440	SOAB LP
VE4TTH	371	156	170,352	SOAB LP
VE2EBK	393	143	166,023	SOAB LP
VE3TU	345	163	165,282	SOAB LP
VE1JBC	403	136	163,608	SOAB HP
VE6TN	321	168	161,280	SOAB(A) LP
VE6KD	336	153	152,388	SOAB(A) HP
VA2QR	296	150	129,150	SOAB HP
VA3NW	297	145	127,455	SOAB LP
VE3DVY	322	136	125,256	SOAB LP
VE3FU	269	154	124,278	SOAB HP
VO2NS	371	108	114,048	SOAB HP
VA3GD	276	140	113,820	SOAB LP
VO1BBN	214	127	80,772	SOAB LP
VE3MIS (VE3VE)	305	82	74,292	SO40
VE5KS	200	125	74,250	SOAB LP
VA7ST	328	74	72,150	SO20
VE2BWL	204	120	72,000	SOAB(A) LP
VE5SF	228	106	71,868	SOAB LP
VE3FCT	202	112	67,200	SOAB LP
VA3FP	271	76	61,788	SO15
VE7XF	138	138	56,718	SOAB HP
VE1SQ	265	71	55,593	SO20
VE8GER	238	78	54,756	SOAB LP
VE3FH	231	77	53,130	SO15
VE3RCN	155	86	39,732	SOAB LP
VE2JR	144	91	37,674	SOAB LP
VE2ES (VE2AXO)	140	85	34,680	SOAB LP
VE7FCO	154	71	32,376	SOAB LP
VA7JW	156	70	31,920	SOAB(A) HP
VE3DZ	156	65	30,030	SO40
VE3BK	138	71	28,116	SOAB(A) HP
VE6AMI	130	76	27,360	SOAB LP
VA3BXG	111	81	25,515	SOAB LP
VE3GYL	175	47	24,675	SO15
VA3XH	131	57	22,059	SO40
VE9AA	173	43	21,672	SO40
VA3DBT	100	69	20,493	SOAB LP
VE7QC	115	49	16,611	SOAB(A) LP
VE7ON	124	40	14,880	SO20
VE2FXL	81	58	13,920	SOAB(A) HP
VE3CWU	77	58	13,050	SOAB(A) LP
VA3ZLT	67	67	12,864	SOAB LP
VE7NA	92	50	12,300	M/S LP
VE9BWK	84	49	11,760	SOAB(A) LP
VE4EA	79	46	10,764	SOAB(A) LP
VE9HF	83	45	10,665	SOAB HP
VA2RIO	58	43	7,224	SOAB LP

VE7GM	61	37	6,771	SOAB LP
VE6KK	53	37	5,661	SOAB LP
VY2MP	53	35	5,355	SOAB LP
VE7NSR	51	33	4,950	M/S HP
VA7AM	42	42	4,914	SOAB LP
VE6BMX	68	19	3,762	SO10
VE3VSM	43	29	3,741	SO15
VE3NLE	35	34	3,570	SOAB LP
VA3RKM	40	30	3,330	SOAB QRP
VA3DXZ	42	27	3,240	SO20
VA3FN	32	31	2,976	SOAB LP
VE6SQ	32	29	2,610	SOAB(A) LP
VA7XB	31	26	2,262	SOAB(A) LP
VE5GC	42	17	1,989	SO10
VE7JH	37	17	1,836	SOAB LP
VE3AJ	28	22	1,782	SOAB LP
VE5WD	24	24	1,728	SOAB LP
VA3TPV	30	19	1,710	SOAB LP
VE5BCS	36	15	1,575	SOAB(A) LP
VE4DRK	23	19	1,311	SOAB LP
VE3EDY	22	20	1,260	SO160
VE2HIT	16	13	624	SO15
VE7IO	12	11	396	SOAB(A) HP
VA3EEB	11	10	330	SOAB LP
VE7VAW	12	8	288	SOAB LP
VE2JM	8	8	168	SOAB(A) HP
VA2EU	7	7	147	SOAB LP
VE3IKT	3	3	27	SOAB LP

RUSSIAN DX CONTEST 2013

Call	QSO	DXCC	Oblasts	Score
CF3A	1,695	119	3,136,131	SOAB-MIX
VE3YAA	1,446	95	2,022,178	MO2T
VA2WA	1,029	82	1,339,065	SOAB-CW
VE9ML	813	87	1,106,189	MOST
VE3MIS	787	62	755,331	MO2T
VE7ACN	651	88	737,238	SOAB-CW
VE1ZJ	480	70	517,230	SOAB-CW
VE9HF	526	65	515,310	SOAB-CW
VE1AL	422	71	403,407	SOAB-CW-LP
VE1OP	473	43	357,576	SOAB-CW
VE3RZ	313	52	314,315	SOAB-MIX
VE1RGB	345	41	241,531	SOAB-CW-LP
VE3TA	235	47	195,108	SOAB-CW
VE2AWR	306	20	158,184	SOAB-MIX-LP
VE3CX	219	35	113,678	SOAB-CW
VE3DZ	328	20	106,926	SOSB-7
VE1RSM	163	24	72,316	SOAB-CW-LP
VE3FJ	165	21	66,300	SOAB-CW-LP
VA3EC	152	15	54,589	SOAB-CW-LP
VE3IAE	150	12	47,814	SOAB-CW-LP
VE3GTC	83	7	16,826	SOAB-MIX-QRP
VE2BWL	71	16	15,618	SOAB-MIX-LP
VE9OA	46	16	9,676	SOAB-MIX-LP
VA3ZAK	54	1	8,510	SOAB-SSB-LP
VE3EY	50	3	6,732	SOAB-CW-LP
VE9AA	56	2	6,021	SOSB-28
VA3RKM	64	3	5,868	SOAB-MIX-QRP
VE5MX	35	9	4,750	SOAB-CW
VE9PLS	24	0	2,016	SOSB-14
VA3TPV	25	0	1,872	SOAB-SSB-LP
VE3RCN	21	1	1,568	SOAB-MIX-LP
VA3DBT	24	1	1,442	SOAB-SSB-LP
VA2KZ	16	1	611	SOAB-SSB-LP

SP DX RTTY 2013

Call	QSO	Mult	Score	Category
VE3FJB	290	112	1,474,480	MOAB
VE2FK	310	96	1,259,040	SOAB
VE2EBK	174	67	562,800	SOAB
VA7ST	126	44	220,660	SOAB
VE3VID	80	35	103,880	SOAB
VE3MCF	59	34	70,040	SOAB
VE2NMB	78	27	55,620	SOAB
VE9AA	54	38	52,896	SOAB
VY2LI	41	24	28,080	SOAB
VE2KOT	36	26	23,790	SOAB
VE9BWK	18	12	6,120	SOAB
VE7BGP	3	4	120	SOAB

ONTARIO QSO PARTY 2013

Call	QSO	Mult	Score	Category
VA3CCO	1,083	319	469,249	Multi-Op/Multi TX
VE3ZF	1,115	267	338,289	Multi-Op/Single TX
VE3RZ	592	247	270,218	SOHP Mixed
VE3DC	693	230	220,340	Multi-Op/Multi TX
VE3CRU/R	322	221	219,400	Rover Single-Op
VE3MQ/R	352	315	214,905	Rover Multi-Op
VA3RAC	439	201	154,368	Multi-Op/Single TX
VE3KZ	366	192	147,264	SOLP Mixed
VE3OSZ	292	167	105,544	SOLP CW
VE3SWA	239	143	69,212	Multi-Op/Multi TX
VE3ODX	448	136	65,280	Multi-Op/Two TX
VA3GKO	366	135	56,700	SOLP Phone
VA3KAI	222	117	52,884	SOLP Mixed
VE3FU	189	125	51,500	SOHP Mixed
VE3RCN	263	116	51,272	SOLP Mixed
VE3ZT	173	119	44,982	SOLP CW
VE9ML	192	96	39,456	Multi-Op/Two TX
VE3IAE	195	91	36,218	SOLP Mixed
VE3KAO	117	80	24,480	SOLP CW
VA3FN	103	70	18,340	SOLP CW
VA3EC	110	76	18,240	SOLP Mixed
VE3WBT	144	83	15,687	SOHP Phone
VE3FH	98	59	14,042	SOLP Mixed
VA3TIC	112	61	10,126	SOHP Mixed
VE3FZ	73	52	8,944	SOLP Mixed
VE3HEU	86	43	8,471	SOLP Mixed
VE3XAT	62	47	7,614	SOLP Mixed
VE3CV	73	45	6,840	SOLP Mixed
VE3AGC	62	43	5,891	SOLP Mixed
VA3GUY	74	34	5,032	SOLP CW
VA3OPN	57	34	4,760	SOLP Mixed
VE3PYJ	53	39	4,173	SOLP Phone
VE9OA	43	31	4,061	SOLP Mixed
VE2FK	40	28	3,360	SOHP CW
VE4YU	37	28	2,940	SOLP Mixed
VA2SG	43	31	2,883	SOLP Mixed
VA3ATW	71	36	2,880	SOLP Phone
VE9AA	33	23	2,622	SOHP CW
VE2AWR	52	24	2,592	SOLP Mixed
VE3GCB	36	28	2,520	Multi-Op/Single TX
VY2LI	38	23	2,392	SOLP Mixed
VE3EIB	36	24	2,112	SOLP CW
VE3JM	41	23	1,932	SOLP Mixed
VE3NQM	32	26	1,768	SOLP Phone
VE3OM	32	19	1,672	SOLP CW
VE3AD	37	26	1,664	SOHP Phone
VE4VT	23	19	1,539	SOHP Mixed
VE3NB	37	21	1,533	SOLP Phone
VE3FMW	25	22	1,452	SOLP CW
VA2ES	21	15	1,320	SOLP Mixed
VA3RJ	23	16	1,120	SOLP CW
VA3ATT	23	17	1,054	SOHP CW
VE3CGR	20	17	799	SOLP Phone
VE3TU	21	19	741	SOLP Phone
VA7BEC	16	12	516	SOLP Phone
VE1RSM	15	10	460	SOLP CW
VA7KO	14	11	396	SOLP CW
VE4TCH	8	8	352	SOLP Phone
VE6BMX	7	7	315	SOLP Mixed
VE5KS	11	10	310	SOLP Mixed
VA3TMI	13	12	264	SOLP Phone
VA3EEB	12	12	252	SOLP Phone
VA3AH	8	8	136	SOLP Phone
VE7JH	6	4	72	SOLP Mixed
VA3WR	29	152	49	SOQRP
VA2NB	16	174	39	SOQRP
VA3RKM	5	108	33	SOQRP
VE3HUR	0	90	22	SOQRP
VE3DQN	3	57	17	SOQRP
VE3XD	0	8	4	SOQRP
VE7NI	0	8	2	SOQRP

RSGB – BERU 2013

Call	QSO	Mult	Score	Power	Section
VE3EJ	1,146	192	12,130	100	Open
VA3RAC	1,036	165	10,560	1KW	HQ
VO2AAA	909	141	9,145	--	Open
VE3OI	830	159	9,090	100	Open
VO1RAC	143	113	8,010	700	HQ
VE3JM	787	126	7,895	100	Open
VE3RZ	685	149	7,725	100	Open
VE7JH	590	137	7,350	100	Open
VE9ML	84	125	7,075	100	Multi-Op
VA3DX	585	137	6,825	KW	Multi-Op
VE9HF	676	94	6,040	100	Open
VE3CX	585	92	5,785	100	Open
VO1TA	590	94	5,730	100	Open
VE9AA	539	103	5,575	5	Open
VY2SS	615	81	5,495	--	Open
VE1RAC	412	104	5,220	100	HQ
VE1ZJ	481	94	5,165	100	Open
VE3KZ	431	106	5,155	75 w, ~10W	Open
VE3CRG	429	107	5,145	100	Open
VE7CC	317	103	5,005	100	Open
VE1OP	459	98	4,975	100	Open
VE7RAC	312	103	4,940	95	Open
VA2WA	429	91	4,885	100	Open
VE1AL	455	91	4,855	100	Open
VE3KI	365	108	4,625	--	Restricted
VA7ST	376	84	4,440	100	Open
VE3VHB	237	115	4,285	95	Open
VE3XN	261	98	4,005	5	Open
VE6WQ	309	87	3,985	100	Open
VE3MM	353	69	3,685	90	Open
VE3OSZ	229	79	3,485	90	Restricted
VE3TG	227	81	3,235	100	Restricted
VE4YU	186	85	3,210	100	Open
VE3FH	166	86	3,110	5	Restricted
VE2AEJ	217	70	3,045	100	Open
VA3EC	293	45	2,965	100	Open
VE3IAE	211	60	2,875	100	Restricted
VE5SF	242	44	2,670	100	Open
VO1GO	204	56	2,600	5	Restricted
VE3NE	201	51	2,485	5	Open
VE2AWR	160	55	2,440	90	Restricted
VE5MX	133	56	2,405	50	Open
VE3USP	200	48	2,400	100	Open
VA3DDX	136	61	2,360	100	Restricted
VE6LB	137	55	2,325	100	Open
VE1RSM	164	51	2,300	100	Open
VE3OM	135	62	2,275	50	Open
VE3MGY	115	54	2,055	80	Restricted
VE3ZY	98	58	1,930	40	Restricted
VE7IO	160	35	1,880	1 kw	Multi-Op
VE4VT	83	49	1,675	100	Open
VE3KAO	96	44	1,640	100	Restricted
VE5VA	102	36	1,570	100	Open
VA3RKM	83	43	1,515	100	Restricted
VE9OA	78	40	1,510	5	Open
VA3GUY	146	20	1,410	100	Open
VE2FK	90	33	1,410	100	Open
VE3IGJ	74	41	1,410	100	Restricted
VE3CES	72	35	1,400	100	Open
VE3DZ	55	37	1,315	40-10M mul	Restricted
VA7MM	63	30	1,195	100	Restricted
VE2QV	63	27	1,095	100	Restricted
VE7BGP	40	23	940	100	Open
VE2EZD	55	19	895	90	Open
VO1BQ	29	13	525	100	Restricted
VY2LI	20	9	440	--	Restricted
VE1LS	26	8	410	100	Restricted
VE2HB	16	8	340	100	Open
VE7BQO	9	8	225	5	Restricted
VE7GM	8	7	200	100	Restricted
VE3DQN	7	6	175	100	Restricted
VO2RAC	5	5	125	100	Open
VE3RCN	4	4	100	100	Restricted
VE3XAT	3	3	75	60	Multi-Op

CQ WW WPX SSB 2013											
Call	QSO	Mult	Score	Class							
CF3A	4,166	1,253	16,362,927	SO HP ALL	VA3PAW	127	112	59,584	SO LP 40M (R)		
VE3EJ	3,839	1,159	14,193,114	SO HP ALL	VE2JR	147	126	57,960	SO LP ALL		
VE3DZ	3,515	1,159	13,751,535	SO HP ALL (T)	VA3VF	157	127	52,959	SO QRP ALL		
VB2T	3,061	1,062	10,604,070	SO HP ALL	VA3AH	129	117	46,332	SO LP ALL		
VE3UTT	2,041	950	6,592,050	SA HP ALL	VE9MY	109	105	42,630	SA HP ALL (T)		
VE9HF	2,282	886	6,137,322	SO HP ALL	VY1EI	137	111	36,519	SA LP 20M (T)		
VE7GL	2,375	858	5,998,278	MULTI-TWO	VE3XTI	125	109	35,098	SA LP ALL (T)		
VC6A	2,353	879	5,933,250	MULTI-ONE	VA2UTC	128	104	32,448	SO LP ALL		
VO1JNS	1,734	783	3,917,349	MULTI-ONE	VE9PLS	111	102	28,560	SO LP ALL		
VA3SWG	1,170	605	2,297,185	SO LP ALL	VE4TCH	123	93	28,365	SO LP ALL		
VE3MIS	1,177	616	2,280,432	MULTI-TWO	VA3XH	74	69	22,770	SO HP 40M (T)		
VE9AA	1,101	575	2,102,775	SO HP ALL	VC6X	97	85	22,015	SO LP ALL		
VA5AA	1,012	575	1,599,650	MULTI-MULTI	VE3EDY	93	60	20,820	SO LP 160M (T)		
VE3RZ	841	549	1,565,748	SA HP ALL	VE3SB	67	65	19,565	SO LP 40M		
VA2AM	788	537	1,424,124	SA HP ALL	VE3VSM	80	64	19,456	SO LP 80M		
VA3YP	988	589	1,422,435	SA HP 20M	VY2MGY/3	106	86	19,264	SA LP 20M (T)		
VA2TG	968	533	1,366,079	MULTI-ONE	VE7QC	97	76	17,556	SA LP ALL		
VA7ST	1,021	501	1,352,700	SO HP ALL	VE7BGP	91	75	17,400	SO LP ALL (T)		
VE7XF	782	480	995,520	SO HP ALL (T)	VE3XAT	78	74	15,466	SA LP ALL		
VA7CRZ	816	456	973,560	SO LP ALL (T)	VA6FOX	59	53	11,978	SO LP 40M (T)		
VE2GSO	803	461	936,291	SO HP ALL	VE6SQ	78	70	11,690	SA LP ALL (T)		
VA7BEC	830	456	931,608	SA LP ALL	VE3EY	70	65	11,440	SO LP ALL (T)		
VE5MX	721	425	827,050	SA HP ALL	VE3QEE	65	55	10,945	SO LP ALL		
VE6AO	839	409	750,106	MULTI-ONE	VE6EY	69	65	10,855	SO LP ALL (T)		
VE3FH	611	355	679,115	SO LP ALL	VA3EEB	62	57	10,773	SO LP ALL (R)		
VE3TW	589	372	658,812	SO LP ALL (T)	VE7NAE	80	61	10,492	SO LP ALL		
VE4VT	556	366	617,808	SO HP ALL	VO1HP	61	53	9,116	SA LP ALL		
VE3YAA	645	333	592,407	SA HP ALL	VE7GPK	64	55	8,360	SO LP ALL		
VE3RHD	554	326	591,038	SO LP ALL	VE7YU	46	42	5,628	SO LP 10M		
VE3NB	545	347	586,777	SO LP ALL	VE3PYJ	34	33	4,917	SO LP 40M		
VE3CX	548	274	575,126	SA HP 80M	VE6FI	50	44	4,708	SO LP 15M		
VA3GKO	535	305	540,155	SO LP ALL	VE6KAD	43	37	3,848	SO LP ALL		
VA3UG	544	331	523,973	SA LP ALL	VE5GC	45	40	3,840	SO LP 15M		
VE3ZZ	488	328	505,448	SA HP ALL (T)	VE3CWU	37	37	3,626	SA LP 20M		
VE2EBK	523	358	501,916	SA LP ALL (T)	VE3XB	36	36	3,384	SO LP ALL (T)		
VE2NGH	458	343	488,775	SA HP ALL (T)	VA7IR	35	31	3,162	SO LP 10M (T)		
VY2LI	386	256	441,344	SO HP 40M (T)	VE3AD	32	30	2,700	SO HP ALL		
VO1TA	506	344	421,400	SO HP 15M (T)	VA7GL	35	33	2,541	SO LP ALL		
VE1ZD	441	315	399,105	SA LP ALL	VA3TPV	30	29	2,494	SO LP ALL		
VO2NS	502	320	382,400	SO HP ALL	VE2PDT	27	26	1,794	SO LP ALL		
VE6GCE	475	304	373,008	SA HP ALL	VA2RIO	23	23	1,265	SO LP ALL		
VE2EZD	374	242	344,124	SA HP ALL	VE3OIL	21	17	1,173	SO LP 80M		
VE7WO	494	303	328,755	SO HP 20M	VA3NOE	19	19	1,064	SO LP ALL		
VE2HIT	380	244	300,608	SO LP ALL	VE9BWK	18	18	828	SA LP 20M		
VE3KKQ	369	248	292,144	SO LP ALL	VE3IQ	13	11	539	SA HP 80M		
VE3IAE	377	307	291,650	SO LP 20M (T)	VA3RKM	13	13	481	SO QRP ALL		
VE6BMX	390	300	278,100	SA HP 20M (T)	VA2BOY	15	14	462	SO LP 10M		
VA2ES	363	245	271,215	SO LP ALL	VA3WR	10	10	260	SO QRP 20M		
VA2AFH	342	296	270,544	SA LP 20M	GEORGIA QSO PARTY 2013						
VA2WA	307	247	233,909	SA LP ALL	Call	QSO	Mult	Score	Category	Power	
VE8GER	347	260	224,120	SO LP ALL (T)	VE3TW	173	97	28,130	MIXED	LP	
VE1AL	299	271	217,613	SO LP 15M	VE1RGB	134	80	21,440	CW	LP	
VE5TLW	355	240	217,440	SO LP ALL	VE9AA	127	75	19,050	CW	HP	
VA7FC	322	227	192,269	SA LP ALL (T)	VA3ATT	92	60	11,040	CW	LP	
VE3TA	290	231	191,268	SO HP ALL	VE5KS	67	60	7,620	MIXED	LP	
VE6KD	294	242	190,454	SA HP ALL	VA3GKO	78	41	3,198	PH	LP	
VA3GD	309	202	181,598	SO LP ALL	VE3VID	70	42	2,940	PH	LP	
VE1SQ	258	233	158,440	SO LP 20M	VY2LI	49	37	2,442	MIXED	LP	
VE3JM	265	205	156,005	SO HP ALL	VE3PYJ	31	23	713	PH	LP	
VA3NW	251	195	153,660	SO LP ALL	VA3AH	26	21	546	PH	LP	
VE4YU	274	212	150,944	SO LP ALL	VE1BVD	25	18	450	PH	LP	
VE2FXL	232	186	145,080	SA HP ALL (T)	YURI GAGARIN INTERNATIONAL DX CONTEST 2013						
VE5KS	290	214	141,454	SA LP 15M	Call	QSO	Mult	Score	Category		
VA3DBT	268	189	136,647	SO LP ALL (R)	VE2FK	208	33	35,310	SOAB HP		
VE3XQ	243	170	135,320	SO LP ALL (T)	VE9ML	259	30	32,970	MOAB		
VE3BK	263	180	135,000	SA HP ALL	VE1OP	185	17	12,155	SO20 HP		
VE6EX	294	210	132,720	SO QRP 20M	VE9OA	63	24	6,528	SOAB LP		
VA3TIC	226	183	131,028	SA LP ALL (R)	VE1RSM	47	19	5,092	SOAB HP		
AB2TC/VE3	246	199	126,564	SO LP ALL	VE9AA	57	11	4,818	SO40 HP		
VE3TU	258	200	125,000	SO LP ALL (T)	VA2WA	70	13	3,523	SO20 LP		
VE9ML	166	150	124,800	SA LP 40M	VE3OM	44	13	2,886	SOAB LP		
VA7XB	263	197	118,397	MULTI-ONE	VE2JR	193	12	2,316	SOAB LP		
VE3KZ	195	194	110,580	SO LP ALL (T)	VE3KAO	154	14	2,156	SOAB LP		
VA3FP	214	192	108,480	SO HP 15M	VE3MGY	30	10	1,960	SO40 LP		
VE9EX	203	156	97,500	SO LP ALL (R)	VE6TL	29	14	1,680	SOAB HP		
VE7IO	209	181	96,111	MULTI-TWO	VE3DZ	35	10	1,310	SO20 LP		
VA2QR	197	158	95,906	SO HP ALL	VE9BWK	26	6	606	SO20 LP		
VA2CO	198	180	93,600	SO LP 15M	VE3SQZ	22	7	574	SO20 LP		
VE6AMI	198	168	92,232	SA LP ALL	VE2KOT	12	5	235	SO20 LP		
VE9OA	197	167	82,665	SO LP ALL							
VA3GUY	175	167	80,828	SO LP 20M (T)							
VE7FCO	203	156	77,688	SO LP ALL (T)							
VE3SWS	124	119	72,352	SO LP 40M (T)							
VE7JH	173	146	64,970	SA LP ALL							
VA3ROC	164	125	64,500	SO LP ALL							

SP DX 2013

Call	QSO	Mult	Score	Category
VE9HF	393	76	89,604	SO AB MIXED HP
VE1RGB	222	69	45,954	SO AB CW LP
VE3MIS	197	46	27,186	MO AB MIXED
VE3DXP	191	44	25,212	SO AB PHONE LP
VE3BDN	216	35	22,680	SO TB MIXED
VE9OA	81	43	10,449	SO AB MIXED LP
VE3TW	62	22	4,092	SO AB MIXED LP
VA3EC	54	24	3,888	SO AB CW LP
VE3PND	75	16	3,600	SO 40M CW
VE7JH	50	21	3,150	SO AB MIXED LP
VE1ZA	42	22	2,772	SO AB PHONE LP
VO1BBN	38	24	2,736	SO AB PHONE LP
VE3FJ	57	15	2,565	SO 15M CW
VE9PLS	37	22	2,442	SO AB PHONE LP
VE9AA	38	13	1,482	SO 15M CW
VA3GUY	31	13	1,209	SO 20M CW
VA3LUK	24	12	864	SO 15M PHONE
VE3TA	15	13	585	SO AB MIXED HP
VA2RIO	14	12	504	SO AB MIXED LP
VA2OBW	16	9	432	SO 20M PHONE
VE5MX	14	10	420	SO AB MIXED HP
VE9CX	13	10	390	SO AB PHONE LP
VA2UTC	8	7	168	SO 15M PHONE
VE7GM	9	6	162	SO AB CW LP

CQ MANCHESTER MINEIRA DX CONTEST 2013

Call	QSOs	Mult	Score	Category	Power
VE9AA	300	96	139,888	SOAB	HIGH
VE3FH	115	66	45,756	SOAB	LOW
VE9HF	207	63	44,590	SOAB	HIGH
VE3UZ	113	83	43,907	SO15	--
VO1TA	164	65	43,523	SOAB	LOW
VE4YU	106	72	42,588	SOAB	LOW
VO1HP	97	64	32,725	SOAB	HIGH
VE3KZ	104	76	32,554	SOAB	HIGH
VE1RSM	83	63	27,360	SOAB	HIGH
VE3FJ	82	65	23,075	SO15	--
VE9BWK	87	48	18,391	SOAB	QRP
VE2AWR	75	47	16,932	SOAB	LOW
VE6GJ	94	47	16,100	SOAB	LOW
VE2FK	74	45	14,398	SOAB	HIGH
VA7ST	72	38	10,146	SOAB	LOW
VE5MX	46	41	9,460	SOAB	HIGH
VE2BZO	51	40	7,298	SOAB	LOW
VE9OA	55	37	6,734	SOAB	LOW
VE6BMX	48	30	6,448	SOAB	LOW
VE2KOT	41	31	5,478	SOAB	QRP
VE7JKZ	31	22	2,829	SOAB	HIGH
VE7JH	27	29	2,436	SOAB	LOW
VE2AWW	19	25	2,250	SOAB	LOW
VE3EXW	18	20	2,040	SO10	--
VE2EBL	15	16	1,328	SO40	--
VA3GUY	16	16	1,232	SO15	--
VA3FN	16	18	1,116	SOAB	LOW
VE2JR	16	15	990	SOAB	LOW
VE7ACN	16	11	583	SOAB	HIGH
VE3QBH	10	11	561	SOAB	LOW
VE2OCH	7	8	208	SOAB	LOW
VE3VVF	1	1	10	SO10	--

EA-RTTY 2013

Call	QSO	Mult	Score	Category
VA2UP	975	290	778,070	SINGLE-OP ALL DX
VE2FK	391	138	116,196	SINGLE-OP ALL DX
VE2EBK	305	157	111,313	SINGLE-OP ALL DX
VE3FH	240	156	88,608	SINGLE-OP ALL DX
VA7ST	292	147	80,262	SINGLE-OP ALL DX
VY2LI	383	88	60,544	SO15
VE3KAO	183	118	47,908	SINGLE-OP ALL DX
VE7BSM	190	88	25,168	SINGLE-OP ALL DX
VE2NMB	109	78	23,010	SINGLE-OP ALL DX
VY2MP	79	65	15,340	SINGLE-OP ALL DX
VE3XAT	98	85	13,685	SINGLE-OP ALL DX
VE9BWK	83	58	8,700	SINGLE-OP ALL DX
VE6AMI	68	56	6,104	SINGLE-OP ALL DX
VE9AA	63	46	5,290	SO15
VE7BGP	39	40	2,880	SINGLE-OP ALL DX
VE3VSM	43	32	2,368	SINGLE-OP ALL DX
VE7GM	19	25	750	SINGLE-OP ALL DX
VE3VID	16	18	522	SINGLE-OP ALL DX

QUOI DE NEUF AU NIVEAU DES "COMMUNICATIONS" CHEZ RAC?



En octobre dernier, Vincent Charron, VA3GX/VE2HHH, s'est joint à l'équipe de RAC en tant que directeur des communications et levées de fonds. Vincent travail à partir de notre bureau d'Ottawa et fait équipe avec le gérant Frank Greene.

Le site internet du RAC est présentement en voie de reconstruction. Cette transformation prendra quelque temps toutefois en bout de ligne le site offrira une meilleure plateforme aux usagers et facile de navigation pour les membres autant que le public en générale.

De plus en plus, RAC capitalisera sur ses deux plateformes sociales actuelles, le Facebook et Twitter pour offrir la diffusion rapide d'informations et actualités pertinentes en radioamateur. Vous nous retrouverez sur Twitter @RACTWEETS et RAC Radio Amateurs Canada sur Facebook. Veuillez consulter ses deux plateformes régulièrement pour visionner des mises à jours régulières à partir de votre bureau national.

Avez des brèves informations, histoires personnelles (DX, vos débuts radio), photos (votre station, antennes) que vous aimeriez partager avec RAC?

Ne vous gênez pas de nous les envoyez par poste ou courriel et nous tenterons de vous offrir une possibilité de les diffuser sur une de nos plateformes d'information les plus adéquates.

Vincent Charron, VA3GX/VE2HHH
RAC Director of Communications and Fundraising
720 Belfast Road, #217, Ottawa ON K1G 0Z5
Telephone: 1-877-273-8304
Email: hq.communications@rac.ca

WISCONSIN QSO PARTY 2013

Call	QSO	WI Ctsy	Score	Power
VE7CV	121	53	15,900	SO LP
VE9AA	63	38	4,788	SO HP
VE2KOT	29	21	2,436	SO QRP
VE3GXW	36	25	2,250	SO ILP
VE1OP	37	27	1,998	SO HP
VE3CX	40	24	1,488	SO HP
VE5BCS	22	12	432	SO LP
VE7GM	7	6	90	SO LP

NA SPRINT RTTY MARCH 2013

Call	QSO	Mult	Score
VE3VSM	103	33	3,399
VE6SQ	89	31	2,759
VE3RCN	42	22	924
VE2NMB	39	22	858
VE3JI	36	21	756
VE2EBK	32	18	576
VE9AA	27	19	513



CLARA CONTEST 2013

Call	Score
VE1QT	6,441
VE3DBQ	5,700
VA1YL	5,504
VE3HQH	4,012
VA3BEC	924
VA3RMW	720
VE9GLF	637
VE3MHP	500
VE2VCI	200
VE7TJF	138
VE3HAI	96

For the RAC Store visit:
http://www.cafepress.ca/rac_radio



CONTEST CALENDAR FOR MARCH, APRIL AND EARLY MAY 2014

Contest Name	Start	End	Web Address
ARRL Int. DX SSB	0000z 1 Mar	2359z 2 Mar	http://www.arrl.org/arrl-dx
ARCI Grid Square Sprint	1500z 8 Mar	1800z 8 Mar	http://www.qrparci.org/contests/qrp-arci-contests
RSGB Commonwealth CW	1000z 8 Mar	1000z 9 Mar	http://www.rsgbcc.org/hf/rules/2014/rberu.shtml
Idaho QSO Party	1900z 9 Mar	1900z 10 Mar	http://www.idahoarrl.info/qsoparty/rules.htm
NSARA Contest (Morning)	1200z 9 Mar	1600z 9 Mar	http://nsara.ve1cfy.net/nsaracst.htm
NSARA Contest (Afternoon)	1800z 9 Mar	2200z 9 Mar	http://nsara.ve1cfy.net/nsaracst.htm
NCJ Sprint RTTY	0000z 9 Mar	0400z 9 Mar	http://ncj.arrl.org/Sprint-Rules.pdf
Wisconsin QSO Party	1800z 9 Mar	0100z 10 Mar	http://www.warac.org/wqp/wqp.htm
Russian DX Contest	1200z 15 Mar	1200z 16 Mar	http://www.rdx.org/asp/pages/rulesg.asp
Virginia QSO Party (Part 1)	1400z 15 Mar	0200z 16 Mar	http://www.qsl.net/sterling/uf1.htm
Virginia QSO Party (Part 2)	1200z 16 Mar	2400z 16 Mar	http://www.qsl.net/sterling/uf1.htm
NCJ Sprint SSB	0000z 16 Mar	0400z 16 Mar	http://ncj.arrl.org/Sprint-Rules.pdf
QCWA Spring QSO Party	1800z 16 Mar	1800z 17 Mar	http://www.qcwa.org/
BARTG Spring RTTY Contest	0200z 15 Mar	0200z 17 Mar	http://www.bartg.org.uk/hfrrtycontest.asp
CLARA & Family Contest (Part 1)	1700z 18 Mar	1700z 19 Mar	http://www.clarayl.ca/
NAQCC Sprint	0030z 20 Mar	0230z 20 Mar	http://naqcc.info/contests.html
CLARA & Family Contest (Part 2)	1700z 22 Mar	1700z 23 Mar	http://www.clarayl.ca/
Oklahoma QSO Party (Part 1)	1300z 22 Mar	0100z 23 Mar	http://k5cm.com/okqp.htm
Oklahoma QSO Party (Part 2)	1300z 23 Mar	1900z 23 Mar	http://k5cm.com/okqp.htm
CQ WW WPX SSB	0000z 29 Mar	2359z 30 Mar	http://www.cqwp.com/
ARCI QRP Spring CW	1200z 5 Apr	2359z 6 Apr	http://www.qrparci.org/contests/qrp-arci-contests
SP DX Contest	1500z 5 Apr	1500z 6 Apr	http://www.sk3bg.se/contest/pdf/spdx.pdf
EA RTTY Contest	1600z 5 Apr	1600z 6 Apr	http://www.ure.es/english/ure-contest/430-ea-rtty-contest.html
NAQCC Sprint	0030z 9 Apr	0230z 9 Apr	http://naqcc.info/contests.html
JIDX CW Contest	0700z 12 Apr	1300z 13 Apr	http://www.jidx.org/jidxrule-e.html
Georgia QSO Party (Part 1)	1800z 12 Apr	0359z 13 Apr	http://georgiasqso.org/
Georgia QSO Party (Part 2)	1400z 13 Apr	2359z 13 Apr	http://georgiasqso.org/
Holyland DX Contest	2100z 18 Apr	2100z 19 Apr	http://www.iarc.org/iarc/en/Contests
Michigan QSO Party	1600z 19 Apr	0400z 20 Apr	http://www.miqp.org/index.html
Ontario QSO Party (Part 1)	1800z 19 Apr	0500z 20 Apr	http://www.va3cco.com/oqp/rules.htm
Ontario QSO Party (Part 2)	1200z 20 Apr	1800z 20 Apr	http://www.va3cco.com/oqp/rules.htm
Manchester Mineira DX Contest	1200z 19 Apr	2359z 20 Apr	http://www.cwjf.com.br/
YU DX Contest	2100z 19 Apr	1700z 20 Apr	http://www.yu1srs.org.rs/dl/yudx/yudxmain.html
Nebraska QSO Party	1100z 19 Apr	1700z 20 Apr	http://www.qcwa.org/chapter025-rules-ne-qsl-party.pdf
Florida QSO Party (Part 1)	1600z 26 Apr	0159z 27 Apr	http://www.floridasqso.org/index.html
Florida QSO Party (Part 2)	1200z 27 Apr	2159z 27 Apr	http://www.floridasqso.org/index.html
SP DX RTTY Contest	1200z 26 Apr	1200z 27 Apr	http://www.pkrgv.org/zbior.html
Helvetia Contest	1300z 26 Apr	1259z 27 Apr	http://www.uska.ch/index.php?id=87&L=3
ARI DX Contest	1200z 3 May	1159z 4 May	http://www.ari.it/index.php?option=com_content&view=category&layout=blog&id=250&Itemid=270&lang=en
7QP QSO Party	1300z 3 May	0700z 4 May	http://www.codxc.com/new/page.asp?content=start
CQ-M International DX Contest	1200z 10 May	1159z 11 May	http://www.srr.ru/CONTEST/cq_m_11_eng.php
Volta WW RTTY Contest	1200z 10 May	1200z 11 May	http://www.contestvolta.com/
Note: In the above chart an * indicates Local Times			

SECTION NEWS THE RAC FIELD ORGANIZATION FORUM

BRITISH COLUMBIA/YUKON:

SM Paul Giffin, VA7MPG
A/SM Ron McFadyen, VY1RM
A/SM Neil King, VA7DX
STM Al Ross, VE7WJ
SEC Fred Orsetti, VE7IO
SEC Terry Maher, VYIAK (Yukon)
OBM Bill Foster, VE7WWW OOC:
Dennis Wight, VE7IJJ
ACC: Karla Wakefield, VA7KJW
Website: www.va7mpg.ca

NOVEMBER-DECEMBER SM REPORT:

Congratulations to the members of the Surrey Amateur Radio Club and the Surrey Emergency Program Amateur Radio for coming in first in Canada in the 3A category for the 2013 Field Day.

Our Section Emergency Coordinator, Fred Orsetti, VE7IO, organized a Simulated Emergency Test. The results of this exercise can be found on page 47. In addition to this SET there is a cross-border SET planned for early January. Results of that activity will not be available by this edition deadline, but will be reported on in the next edition.

Emergency Management Awards nominated persons in the Public Safety Lifeline Volunteer Program. This year the award for Amateur Radio involvement went north to Prince George. Frank VanderZande, VE7AV, of Prince George was awarded a Public Safety Lifeline Volunteer award for emergency communication on November 20. Frank was presented with the award at a ceremony held at the Emergency Management of BC North East Region Office (Provincial Regional Emergency Operation Centre) or referred to EMBC by us. It was attended by 12 members of PGARC, as well as EMBC personal, and members of Prince George Search and Rescue including from the PGSAR Quad group. It was hosted by EMBC and finger food served after.

Frank, VE7AV, earned his Amateur Radio licence at age 14 and took a lead role in developing Amateur emergency communications throughout his work with Industry Canada. In addition to a 35-year radio communications career in the federal public service, Frank has taught Amateur Radio since 1970.

He served two terms as President of the Prince George Amateur Radio Club and was the North East Provincial Emergency Operations Centre Radio Station

manager. He has been associated with the Red Cross as a Disaster Management Emergency Response Team Members since 2001, and has been a project lead for the Prince George Amateur Radio Club emergency communication trailer, a trailer now used to support Search and Rescue efforts across northern British Columbia.

It is not surprising that Frank, VE7AV, is receiving this special recognition. Frank's passion for radio began very early and he has used his expertise wherever he has lived.

Each year, volunteers are recognized for their outstanding contributions in six categories.

Search and Rescue, Emergency Social Services, Provincial Emergency Program (PEP), Air, Road Rescue, Emergency Communications and Lifetime Achievement. Emergency Communications response when all other systems of communication fail. A proven and reliable means of communications, emergency or "ham" radio is a public safety lifeline that assists within the community and links the community in a crisis to where relief and support can be coordinated. For further information about our club, go to www.pgarc.org

Report by Larry Anderson, VE7MK

At the present time BC has three recognized NTS nets, the British Columbia Emergency Net (BCEN), the British Columbia Yukon Traffic Net (BCYTN) and the Coast Emergency Traffic Net (CECA). In the last three months of 2013 these nets handled 357 pieces of traffic. These numbers would support the idea that NTS is alive and well in British Columbia.

In addition, the BC Official Bulletin Stations – of which there are 16 covering 23 nets – relayed 688 bulletins in 2013. Thanks to all involved in relaying information.

Two active BC Amateurs, Neil King, VA7DX Assistant BC/Yukon Section Manager, and Steve Wright, VE7CT, will be taking part in the Amsterdam Island DXpedition in January and February. For information on this adventure go to <http://www.amsterdamdx.org/>. This website has a lot of interesting information about this venture.

The ARRL has started their Centennial Year with W1AW

moving to various US locations, as well as their QSO party. Congratulations to the ARRL on this achievement.

The BC Section website at <http://www.va7mpg.ca> continues its journey. At the end of two years there have been 16,000 hits, over 900 items published and 174 followers on the Twitter account. If you or your group would like something published either in this column or on the web please send it to me at va7mpg@rac.ca.

– 73, Paul, VA7MPG

Public Service Honour Roll

November:

VA7MPG 269, VE7EEX 138, VE7ET 80, VE7GN 165, VE7WJ 140 and VE7WWW 150.

December:

VA7MPG 95, VE7DWG 90, VE7GN 150, VE7WJ 100 and VE7WWW 96.

Bulletins:

November 37

December 57

ALBERTA:

SM: Garry Jacobs, VE6CIA
SEC: Curtis Bidulock, VE6AEW
STM: Jack Humphries, VE6JRH
OOs: Tom Martens, VE6TRM
Don Momen, VE6JY

NOVEMBER-DECEMBER SM REPORT:

Starting off I have to say a special thank you once again to Curtis, VE6AEY, for his continued efforts at keeping the Alberta Resource Manual updated and current. It is an extremely detailed document with area contact information for all parts of the province.

Welcome to Rob McMillan, VE6XMB, from Raymond, as the new EC for ARES Lethbridge Region. Rob will be confirming his AECs for the neighbouring counties that the group will serve.

In NTS news, thanks to the Alberta hams for coming to our rescue in staffing RN7 with liaison to APSN. Lorne, VE6AWI, is checking in regularly, thank you Lorne!

Report from Lloydminster

We had a session introducing most ARES members to the City of Lloydminster equipment including the Winlink 2000 VHF/UHF Packet systems. Point to point RF email messages were exchanged between the systems using RMS Express.

Four ARES members participated in an exercise with the City of

Lloydminster. We used the Winlink RF email point to point systems. As the City of Lloydminster has their semi-annual exercises we will be rotating all ARES members through the stations so they can gain some familiarity.

I'm attempting to run a VHF email packet night after the Sunday evening net on the repeaters and simplex, however a critical mass of Amateurs with TNCs hooked up to their systems isn't quite there yet. (– Tony Toews VE6MVP/VA6OO).

– Garry Jacobs, VE6CIA

MANITOBA:

SM: Jan Schippers, VE4JS
STM: Jan Schippers, VE4JS
SEC: Vacant
DECS: Jeff Dovyak, VE4MBQ (Capital Region and CanWarn); Gord Snarr, VE4GLS (South-East Central Region / South-West Region); Wayne Warren, VE4WR (North Region and Special Projects); Vacant (North-Eastern Region); Vacant (North-West Region); EC Ron Wliscroft, VE4QE (Selkirk and District); Bill Boskwick VE4BOZ for RM of Grey, RM of Dufferin & Town of Carman

NOVEMBER-DECEMBER SM REPORT:

Winter, that means it must be time to put up antennas. It seems that way anyway. Our Winnipeg ARES group were asked to supply communications for our Santa Clause Parade for the first time. It seems that ARES skills for communication and organization are being recognized as a benefit to different groups in Winnipeg. Thanks to Jeff Dovyak, VE4MBQ, and the ARES group for their dedication to our hobby. The end of the year brings year-end checkin totals of 6,989 for the Weather net and 6,784 for the Seniors net.

Winnipeg ARES

Jeff Dovyak, VE4MBQ

Twenty-six Winnipeg ARES members and affiliates provided volunteer Amateur Radio communications for the Santa Clause Parade on Saturday, November 16 under the supervision of Glen Napady, VE4GWN (we could probably have utilized 35 or 40 operators).

We supported the Safety & Security Team whose main function was to encourage spectator engagement of the "No Feet On The Street" campaign. This was a great opportunity for us to have this kind

of event for an exercise (large crowds, cold weather, majority of event during hours of darkness). It was a very nice gesture and much appreciated that Santa Clause Parade Executive Director Ron Mark attended our November 19 meeting to bring thanks on behalf of the parade organizers and comment on how helpful ARES support was to the smooth and safe functioning of the parade.

Our volunteer operators were: VA4s: PNO, AJG, RWT, MAC and VE4s: KAZ, HK, JDH, JAH, PH, STS, AJO, DWG, CHT, MWH, SIG, TRO, EIH, HAZ, KEH, YYL, GMB, SCH, CLK, RST, CDM and GWN.

Winnipeg ARES members and affiliates supported the Salvation Army Toy Mountain Campaign by donating 24 new children's toys at our December 10 General Meeting.

City of Winnipeg Emergency Preparedness Coordinator Randy Hull gave us a presentation on Re-Entry Procedures. Randy suggested two possible ARES roles during the second phase of a Re-Entry into a neighbourhood:

- 1) Providing Amateur Radio support at Information Points (linking back to VE4EOC)
- 2) Providing shadows for Social Services personnel going door-to-door checking on vulnerable population (linking back to VE4EOC).

– Jan Schippers, VE4JS

Traffic Totals
November: 14
December: 4

ONTARIO NORTH:

SM: Al Boyd, VE3AJB
 Email: ve3ajb@vianet.ca
 STM: Pat Dopson, VE3HZQ
 Email: dopsonp@vianet.ca
 SEC: Dave Hayes, VE3JX
 Email: ve3jx@bell.net
 OBM: Paul Caccamo VA3PC
 Email: va3pc@ciinet.org
 Website: <http://ontario.racares.ca>

NOVEMBER-DECEMBER SM REPORT:

As you read this edition of the TCA we are into 2014 I hope everyone had a good Christmas and New Year. Now that 2013 is behind us and reviewing all the reports and accomplishments from all of Northern Ontario, I am proud to have so many dedicated Amateurs in the Field Services. To all my Field Section Managers and coordinators thank you for the hard work and support for RAC you have shown over the past year.

Now that the structure for Section Management is well underway in Ontario with the three other

Section Managers this has afforded me the time and effort needed to concentrate on Northern Ontario to make our voice heard and to foster the relationships to the municipalities that we serve. To all the ARES members and Amateurs out there that continue to do the public service on behalf of RAC, I want to personally thank you for the continued support you have shown.

2014 is upon us and there is more work to do, however it promises to be a very busy and successful year and I know with your help we can accomplish all the goals we set out to do. Also feel free to contact me at anytime with any concerns or questions as I always look forward to talking to and helping Amateurs. All the best for the New Year.

SEC Dave Hayes, VE3JX reports:

It has been a quiet time for the last two months with most people's thoughts centred on family get-togethers and activities. While we have had our share of snow and cold weather, we have generally escaped the freezing rain conditions that they've had in the lower part of the province. So we haven't had many emergencies to deal with, except for a 13-hour power outage on Manitoulin Island in November. Or at least it's been quiet with respect to the number of monthly reports received.

Amethyst District seems to be experimenting with various digital modes. They have organized nets using some of these. SATERN seems to be quite active up there as well.

With the holidays now over, we will look forward to seeing activity increase and be reported so that all of us will benefit and be encouraged by it all.

Albany DEC reports: We have not received any official reports from ECs in the District. However, I had a fine talk with the **Sault Ste Marie EC Brent MacMillan, VE3OTL**, about the committee which was formed locally to look at the feasibility of installing a D-STAR system (both DV and DD) for use by ARES and the EOC. Of course, it would be available for general use as well. So far the initial response from the local emergency organizations has been very positive.

I did receive a note from **Elliot Lake EC Davis Sutherland, VE3SUT**, that things are very quiet right now, but he hopes to see more activity in the spring.

Amethyst DEC Fred Lesnick, VE3FAL, reports that Amateurs participated in the Santa Clause Parade on November 16 and Norm, VE3XRC, Bob Hanson, VE3RVA,

BRANDON ARC PARTICIPATES IN SANTA CLAUSE PARADE

On the stormy night of November 16, not a star was in sight. The Brandon Amateur Radio Club entered a decorated 2007 Ford ranger in the 2013 Santa Clause Parade. The float depicted a typical



Amateur's home, decorated with lights and a light decorated windmill tower. A tribander antenna with a working rotor was on top of the tower. A dog house with a snowman was in the yard. All of the above was to a 1/6 scale.

The theme of our entry was a predicament common to many married hams. The dog house had a sign on it proclaiming it "Ham Shack" and the dog's name "Fido" was crossed off.

The truck was festooned with lights, mini spotlights and tinsel. A light decorated reindeer on the hood had its lights controlled by a CW key inside the cab operated by CW expert Charlie Bailey, VE4LB. The driver, Rick Jones, VE4AV, operated the PA system which played Christmas music interspersed with voice and CW messages proclaiming a merry Christmas to a large number of gathered parade spectators. George Moore, VE4MSM, in the backseat, operated the antenna rotor and made two metre calls informing everyone who was monitoring our progress and location.

Special thanks goes to Curtis Keber, Manager of the local Giant Tiger, for supplying the truck, inverter and sound system.

All in all despite the inclement weather we all had a lot of fun.

*Submitted by George Moore, VE4MSM and Rick Jones, VE4AV
 Brandon Amateur Radio Club in Brandon, Manitoba*

were coordinators. Bob Hanson, VE3RVA, was the coordinator for the Salvation Army Santa Shuffle on December 7.

Many of the local Amateurs and ARES gang are experimenting with MESHing (Wireless Mesh Network) and having lots of fun with it. This band segment and cheap transmitters makes it a great tool for ARES and Public Service events. We look forward to hearing more about this. (Note: Please see the Ontario East Section report for more information.)

Fred also provided some basic emergency advice by way of reminders in November: "Remember to have spare batteries in the home, flashlights and have your 72-hour survival package(kit) ready to go. Do not run generators indoors or in attached garages. Carry a blanket (sleeping bag), shovel, flares and tea lights in your vehicle just in case of a roadside emergency, and always make a travel plan and let someone know your itinerary and travel plans."

In December, Fred gave these words of encouragement and gratitude:

"I want to take this opportunity to thank all Amateurs involved in ARES in the Amethyst District for their work and dedication. Merry Christmas and Happy New Year and a Safe and Prosperous 2014

We have seen many very powerful natural disasters in 2013 and that just reminds us to always be aware, be ready and prepared.

Your 72-hour emergency plan is crucial, do not think it can't happen to you, because it can.

I write this just after a powerful ice storm once again crippled Southern Ontario, a Winter Vortex is spreading record breaking cold across the United States and Canada; so do not think it can't happen, because it most certainly can.

Emergency and first aid kits in your cars and homes. Fire and smoke and carbon monoxide detectors in your home and a form of backup power and heat should be well-thought-out practices. Be prepared at all times and have a plan."

Fred also reported on the active nets in his District involving ARES participation. The Amethyst VHF net occurs weekly on Sundays at 7:45 pm ET, 6:45 pm CT on IRLP reflector 9031. VE3RRP is usually the net control station, via the VE3TBR repeater. Reflector 9031 connects repeaters in Ignace, Atikokan, Dryden, Kenora, Sioux Narrows, as well as Pinawa and St. Andrews in Eastern Manitoba.

The main purpose of the net is regularly test the system's IRLP connection, and encourage use of VE3TBR, to give stations across the northwest a dedicated time to access Thunder Bay via VHF. Occasionally we get eight checkins from the repeaters that are connected to the reflector. VE3TBR is not kept on the reflector after the net, but is open for any IRLP connection.

Monday SATERN net on VE3TBR 146.820- pl 107.2 IRLP Ref. #9032 SATERN Digital nets on Monday & Wednesday nights: 8 pm 14.065; 9 pm 7.065; and 10 pm 3.5835. Mode: Olivia 8/500 1000Hz waterfall centre Tuesday 2m/LARC ARES net on VE3YQT 147.060- at 7 pm ET, and after this net is the new Thunder Bay ARES Digital Net on PSK31 between 1000 and 2000 Waterfall 145.050 FM mode at 7:30 pm (usually starts after the 2m/ARES net). The Northwestern Ontario ARES net runs every evening at 8:15 pm (local) on 80m 3.750 MHz (note the time does not change with daylight savings time.)

Killarney DEC Stiig Larson, VE3LBX, reports a dearth of reports this period. However, **Manitoulin Island and North Shore EC Jim McLean, VE3LJM**, reported that his group attended two Emergency Management Ontario sponsored community Emergency Simulated Tests on November 12 and 13. Also, there was an ARES callout for members to standby during the 13-hour Hydro outage on November 17. Many members manned the Fire Stations to relay any messages.

— Allan Boyd, VE3AJB

DECs reporting:

VA3s: PC
VE3s: LBX, JX and FAL

ECs reporting:

VA3s: AJV and SPT.
VE3s: AJB for LJM, SUT, RQR, JX and MXJ.

ONTARIO SOUTH:

SM: Ian Snow, VA3QT
SEC: Vacant
SBM: Brad Rodriguez, VE3RHJ
STM: James Davidson, VE3TPZ
Website: <http://ontario.racares.ca>

NOVEMBER-DECEMBER SM REPORT:

I'll begin my report by noting that the number of reporting ARES groups using the automated report generator rose from two in November to six in December. Thank you, and please continue as this is a principal way I gather the activity information that this report is based on.

Congratulations to Bill Hoad, VE3DPG, who completed the EMO Basic Emergency Management Certification course and the associated train-the-trainer course. Congratulations also to Ken Brightling, VE3ETP and Ansil Rock, VE3HDR, who have earned their Certified EC qualification. I'm pleased to report that Ansil has been appointed as the EC of a new ARES group in Middlesex Centre.

As many of you will already know, Emergency Management Ontario has come under the Office of the Fire Marshal. Their website has taken on a more action orientated flavour. An interprovincial, ministerial level, interoperability meeting took place in British Columbia in December, and the Province of Ontario Interoperability Task Group (POINT) is broadening its activities, bringing stakeholders together on March 4 to discuss lessons learned. At time of writing the IC auction for the 700 MHz spectrum is underway and we anticipate announcements in the near future what segment has been allocated to emergency responders, and how new digital technologies will be implemented within this spectrum. How these changes will impact on the ARES community is a point of active discussion amongst the Section Managers as we wrestle with the question of what the ARES role should be in this rapidly evolving milieu. I encourage the EC's to go to the <http://www.pointtaskgroup.ca> website, download the OASIS tool, and spend a little time understanding the scope of renewal that the emergency management community is undergoing. I welcome your thoughts and guidance by email at va3qt@rac.ca.

I began working with Doug Mercer, VO1DM, then the Vice-President Field Services, as a personal advisor (ARES) in the fall of 2010. After completing his predecessor's term, followed by two full-term appointments of his own, for personal reasons he declined to

take a third term. As a visionary and the prime mover behind the project of expand the role of the Sections as an intermediary between the clubs and our national society, Doug served honourably and well. It's been a privilege to be associated with him. We demand a lot of the volunteers who step forward to manage the various facets of RAC's affairs. There is much to do, but the hard reality is that progress is closely tied to the number of hams who are prepared to contribute management expertise, be it at club, section or national society level. Your support is most welcome.

Activity Reports

Bruce County DEC Brad Rodríguez, VE3RHJ, did Simulated Emergency Test 2013 triple duty functioning as a Net Controller on the Trans-Provincial Net, Liaison Station between the TPN and a Grey County ARES exercise, and relayed traffic to the simulated provincial EOC station on 2m. Of note, he passed a 67 group ICS-213 Radiogram with only a one-group verification.

EC Wayne MacLean, VE3WW, reported that **Dufferin County ARES** had mounted four patrols at Orangeville for both Devil's and Halloween Nights, gaining good experience. The group's Communications Bus, a converted ambulance supplied by Dufferin County, was in service on the day of the Orangeville Santa Parade to everyone's disappointment.

Kitchener-Waterloo ARC EC Larry Gorman, VE3LGN, reported that he and technical assistant Ben Sasiela, VE3ST, had installed a second City of Kitchener EMCOMM station. Both stations are in dedicated rooms and are equipped with dual-band radios and fixed antennas. Larry reports a close working relationship with the Kitchener Emergency Preparedness Manager. He also reports that the K-W and regional repeaters have been re-programmed to enable wide-area communications.

— Ian Snow, VA3QT

DECs Reporting:

VE3s: DPG, LKD, RTE and WWM.

OBS Reporting:

October:
VA3STG, VE3GIO, VE3VBR and VE3XTA.

November:
VA3STG, VE3GIO, VE3VBR and VE3XTA.

Traffic Totals:

November: VE3RHJ 13, VE3TPZ 10
December: VE3RHJ 13, VE3TPZ 7

Public Service Honour Roll:

November: VE3RHJ 77, VE3TPZ 50
December: VE3RHJ 76, VE3TPZ 44

ONTARIO EAST:

SM: Michael Hickey, VE3IPC
Email: ve3ipc@gmail.com
SEC: Vacant
STM: Vacant
OBM: Brad Rodriguez, VE3RJH
Email: ve3rhj@rac.ca
Website: <http://ontario.racares.ca>

NOVEMBER-DECEMBER SM REPORT:

Hello fellow Radio Amateurs and welcome to 2014. We were lucky not to have had in this Section the amount of freezing rain that the GTA area received and all the trouble that it caused. This is very reminiscent of the Ice Storm 98 we experienced in Eastern Ontario and Western Quebec. It will be interesting to read EmComm reports coming from the GTA area.

There appears to be a growing interest in the Wireless Mesh Network in the US for the past few years and more recently in Canada. There is a Wireless Mesh Network GURU in the PR-ARES group who is working on a local digital network, with shared info and experience from other such GURUs over Internet MESH talk groups, and he is wondering if there are any other ARES/ EmComm groups in the Eastern Ontario ARES District or in this Section that is working on a local Wireless Mesh Network in their area.

I would like to hear from any group in Ontario who are now looking into, or who are now involved, in the installation of Wireless Mesh Network technologies for the group's EmComm use. I believe this is the way of the future for local Digital EmComm networks that can be used as a good backup to getting emails and files through the local area network and to an outside Internet gateway, when local power and Internet connectivity is out.

I also believe that when municipal officials and others like the Red Cross see a working demonstration of this most recent and now affordable technology, these clients will prefer to have their traffic sent via the Wireless Mesh Network channels because of the larger bandwidth that works on TCPIP. This is like an RF LAN system that provides for connections within the local area network that can also be relayed to the nearest Internet gateway outside the area.

This MESH technology might help recruit new Amateurs to the hobby as this aspect may be of greater interest to the younger generation because it more closely resembles the technical world of networking that they are immersed in daily.

So if there are any groups in Ontario working on this kind of project, please drop me a note by email. I would be very interested in learning of your progress in this endeavour and will gladly share that info with the PR-ARES group MESH GURU.

The Provincial EOC Amateur station in Toronto has a new station manager. Hal Buller, VE3XXX, has been appointed the Station Manager and will have the responsibility to operate the station whenever it is needed by EOC staff during an emergency or disaster situation. Hal has been working in the station since late December and has been active on many nets. We look forward to a greater involvement of the PEOC station, VE3EMO, in many activities in all Sections within the province. This information comes from the GTA Section Manager and is included here for your info.

I wish to thank each Club and ARES group member for their ongoing work and efforts in keeping your group active and in keeping the hobby alive and well. If each Radio Amateur were to bring a friend into the hobby, that would go a long way to keeping the hobby alive and well, and also help the Clubs and ARES/ EmComm groups in serving their community and doing well.

Eastern Ontario ARES District Group reports:

Ottawa EMRG/ARES Group:
Submitted by AEC Mike, VE3FFK for Coordinator Richard, VE3UNW

The Ottawa EMRG/ARES Group conducted their November repeater tests. Some anomalies were found with the Western repeater. Tim, VA3PYC and Mike, VE3FFK, are going to try to figure it out. Thanks to test leader Dave, VE3KMW and participants Paul, VE3CPH, Mike, VE3FFK, Ron, VA3ACZ, Tim, VA3PYC and Bob, VA3QV. The Winlink and local BBS nodes were reported by Mike, VE3FFK to be working fine and VE2CRA appears to be functioning. Mike is posting extracts of the Ontario RAC Bulletins to the VE3OCE-1 EMRG BBS to ensure people have something to read while practising their Packet skills.

On November 30, three of our group members, Tyler, VA3DGN, AEC Mike, VE3FFK and Rick, VE3IHI, were among the 73 Amateurs from as far away as Thunder Bay and the Northeast US who provided communications for the "Rally of the Tall Pines" around Bancroft, Ontario. With large cars moving very fast on marginal, icy roads, safety is always an issue. By their nature, rallies take place

away from population centres, where cellular coverage is sparse. Amateur Radio is still their best solution.

EMRG repeater VA3OFS VHF/UHF, located in Barrhaven, now has new antennas (or at least the VHF antenna is new to the repeater). The original VHF antennas at this site were tuned for the old Fire frequencies so they worked, but not well, and they were not positioned in the best location.

Making changes at this location has been on the books for some time, and we recently got permission to make the change. This work has to be done by professionals, and since EMRG has just enough money in the bank to pay for it, the arrangements were made. The VHF won't have a significant change, but it should perform a bit better to the south and the UHF didn't really work at all before, so it now works great.

Frequencies referred to are: VHF 146.670 (-) TX & RX Tone 136.5 Hz and UHF 444.950 (+) TX & RX Tone 136.5 Hz. We ask that local hams give them a try.

The Ottawa EMRG/ARES Group had their December RPT tests with a good turnout and all repeaters checked out. Thanks go to Tracy, VA3TXN, Tim, VA3PYC, Roger, VE3NPO, Arthur, VA3BIT and Sandy, VE3AAC. We experienced good coverage near the boundaries (Tracy at Metcalfe, Ontario and Tim at Carp, Ontario). Barrhaven's UHF repeater 444.950 is working quite well; was able to communicate well with 1-2W ERP from base antenna downtown. The repeater of VE2CRA and EMRG packet network were both functioning.

LNL-ARES Group:
Submitted by AEC Norm, VE3VY for Coordinator Barrie, VE3BSB

On November 25 a reception was held in Perth for Marc Garneau, MP and former Canadian astronaut. Marc related his personal experiences during his time preparing for and exploring space. During the presentation, EC Barrie, VE3BSB and 12 year old Zach son of Ken, VE3ZKS, spoke about their experiences in high altitude balloon experiments. They had a slideshow giving details of their many balloon flights, as well as pictures from space. Marc commented that it was a well-kept secret and was a wonderful way of introducing the subject of space to younger people.

A number of UHF repeaters donated by a local commercial operation have been passed on to other clubs. Several remain available at this time.

Winlink is growing by leaps and bounds in the Rideau Lakes/ Kingston area. Besides previous reports outlining progress around Westport, work in cooperation with the Frontenac EmComm Group is moving along. There are now at least 18 (or about to be) RMS Packet/RMSE on the air. Some of the stations are in the form of Go Kits. There are presently three fixed nodes and one portable node. There are plans to place another node at Clarendon Station, near Kaladar. Coverage has been extended to Perth through the efforts of EC VE3BSB.

In the Almonte Area, the AARC, which is affiliated with LNL-ARES, was busy this month upgrading and adding additional facilities to the Emergency Operations (EO) facility at the Almonte General Hospital (AGH). Thanks to the generosity of Murray, VE3IFP/VA3IFP, the facility now includes an all-mode radio capable of working all bands including HF. The HF antenna is a long wire type running from the tower alongside the EO to a pole mounted on the hospital. This was tested on all HF bands and tuned well. First contacts were made in the UK and others in Europe and South America. A SignalLink unit has been acquired and will shortly be set up for operation with Winlink etc. In addition, a 5.8 GHz radio was installed on the tower as the first phase of a broadband link to the Almonte fire hall. Thanks go to Fred, VE3CFZ, for climbing the tower and installing that and the HF antenna. The EO functions as the emergency communications hub for both for the hospital and the municipality.

A breakfast meeting was held in Arnprior on November 20 with the Champlain Regional Repeater Association (CRRA) to discuss potential collaboration on a D-STAR repeater at the VE3STP RPT site as well as other collaborative projects. Various system arrangements are being explored for D-STAR operations.

On November 21, Rob, VE3UIX and Don, VE3PDF, participated in the Simulated Emergency Test held jointly between the municipalities of Mississippi Mills and Lanark Highlands. In the test the AARC ARES group simulated the provision of communications for Mississippi Mills as their own system failed for a while during the exercise.

The LNL-ARES Christmas Luncheon was held on December 15 at the Cove Inn in Westport with 29 persons in attendance. A Christmas tree with a ham radio equipment free exchange was successful. Donations were made to the Westport Food Bank. Several prizes were donated

by the club and local business were drawn by lucky ticket holders. Everyone was pleased with the outing.

Repeater improvements were conducted on December 28. John, VE3OAX, Wayne, VE3ICF and EC VE3BSB, replaced the Toledo repeater with a Motorola MSR 2000. New GM300 link radios were installed but not yet activated until checkout is completed. This will require a return to the site. Coverage has been verified into Perth and down to Highway 401. Audio gain adjustments may be required following on air tests.

Repairs were made to the Rideau Ferry UHF repeater and it is back on the air and linked to Christie Lake and Lavant. VE3LCA/R has been reactivated providing local coverage on 146.955- in the Perth Area. A new repeater to replace VE3RNU/R Tweed repeater is under test at VE3BSB QTH.

Digital communications: John VE3PUX has joined the activities using Winmor.

VE3OJC, VE3GXW, VE3ERA and VA3DOY have acquired new TNC-X's for use with RMSE VHF Packet. The VE3REX-7 Westport node continues to function well notwithstanding the inclement weather. Daily traffic continues with stations in Kingston and Westport. VE3BSB in Perth reactivated his digital station using a connection via VE3REX-7. Plans are afoot to hold one or more training/setup sessions in Westport in January, reference to TNCs and other related matters. VA3DOY is expecting to establish a second RMS Packet station with Internet access, in Westport.

Prescott-Russell-ARES Group
Submitted by Acting Group Coordinator Harry, VA3ZAK

The Prescott-Russell (PR)-ARES Group was involved in a United Counties of Prescott and Russell (UCPR) county-wide tabletop exercise centred in Embrun. All emergency response communities from throughout the United Counties were involved. Many of our ARES Group members were either away or unable to attend. However, the group was represented by Acting EC Harry, VA3ZAK and Jean, VA3ZJS, on site, with participation at deployed sites by Ron, VA3RRZ, Mike, VE3IPC, Pierre, VA3SOF and Jim, VA3KV. The county exercise coordinator was Dan Holmes, the CEMC for UCPR, and it was attended by Emergency Management Ontario (EMO) Capital Sector Field Officer, Philippe Geoffroy. On site, Acting EC Harry and Jean installed both

HF and VHF voice capability. They sent messages from the site to various outstations. Also, an ARES presentation and video was delivered by Harry to the assembled participants. The CEMC for Rockland, Fire Chief Pierre Sabourin was most interested in our capabilities. More to follow throughout the winter as discussions with the communities continues.

The PR-ARES Group has been working on developing a digital network with Ron, VA3RRZ, leading this effort with the help of other local members. Ron uses shared info and experience from other such GURUs over Internet MESH talks groups to put together and configure a local Wireless MESH Network for EmComm. This is a joint venture between the Prescott-Russell ARC and the PR-ARES group. Ron is wondering if there are other groups in the District that is also working on the type of project.

Renfrew County East-ARES Group
Submitted by Group Coordinator Debra, VE3IEH

The Renfrew County East (RCE)-ARES Group has had a number of challenges this month as our home VHF repeater, VE3STP, has been experiencing some technical difficulties. Crews sent to the repeater site on several occasions have been working to diagnose and repair the problems and have been only partially successful. The onset of inclement weather (a.k.a. winter) will likely prevent any further major work until spring. As a result of the issues the RCE-ARES net did not launch in November. However, in spite of the repeater's challenge, it will do so in December.

The RCE-ARES Group Coordinator (GC) Debra, VE3IEH, attended a training course at Atomic Energy Canada Limited (AECL) in Chalk River on November 29. The course was entitled "Radiation Safety Awareness" and it was provided by CRL (Chalk River Laboratories) Emergency Preparedness. It was attended by first responders and others involved in emergency preparedness and response. The course was an overview of the nuclear program and how emergency workers would be monitored and kept safe during issues such as a plume release or a spill of radioactive materials.

Renfrew County West ARES-Group
Submitted by Group Coordinator Bob, VE3YX

The Renfrew County West ARES (RCW)-Group GC Bob, VE3YX and David, VE3XAV, met with Atomic Energy Canada Ltd (AECL) on December 3 with Chalk River

Emergency Management personnel who indicated an interest in installing Amateur Radio equipment in their on-site EOC and alternate EOC. They also have an off-site EOC in Deep River and an emergency response vehicle that they would like to equip. We discussed the type of equipment and antennas that we felt would be most appropriate. We also discussed the licensing and operation of the stations. The intent seemed to be to move quickly on this, so we may hear of progress soon.

Stormont, Dundas & Glengarry-ARES Group
Submitted by Group Coordinator Earl, VE3IMP

The Stormont, Dundas & Glengarry (SD&G)-ARES group continues its close association with the SVARC who held their meeting on November 27, with updates given on ARES activities to the membership.

Group Coordinator Earl, VE3IMP, attended the United Counties of Stormont, Dundas and Glengarry's Joint Emergency Exercise and Training session with participants from the Township of North Dundas, South Dundas that was conducted at the Township of South Stormont on November 14.

The SVARC club held its annual elections for January 1, 2014 to December 31, 2015. The new members of the Executive are: President Ed Halliwell, VE3FHI; Vice-President Doug Pearson, VE3HTR; Treasurer Elizabeth Halliwell, VE3EZH; and Secretary Joe Scott, VA3ADB. Congratulations to everyone.

During the Ice Storm of December 20-23 the Group EC took the initiative and contacted the CEMCs of three municipalities with whom SD&G-ARES have agreements: South Stormont, South Glengarry and the City of Cornwall. This allowed confirmation of the cell numbers and confirmed that the services of ARES were available and ready should they be needed.

Severn ARES District Group Report:

Peterborough ARES Group
Submitted by Group Coordinator Terry, VA3MTT

The Peterborough ARES group conducted radio checks at the County Court House building and in the Peterborough Community Police Station and these tests were done by VE3IQZ and AEC VE3KEA.

Other than that it was a quiet ARES month, except for plans being made in December for the training off all Team leaders, and members in each location and

hopefully some IMS classes for January.

More programming on the new Radios still needs to be completed in the near future, at the third fire station.

VE3IQZ, the OBS for Peterborough ARES, reads the Ontario Bulletins every Wednesday night on our ARES net on 146.625 at 7 pm. Good feedback from members and non-members regarding the Ontario Bulletins.

Loyalist ARES District Group Report:
Submitted by Bill, VE3CLQ, on behalf of the Frontenac EmComm Group

The Frontenac EmComm Group reports that they received up to three centimetres of ice in the Kingston and Frontenac area over a two-day period. Many power lines were down as well as phone, cable and Internet connections. Ron, VE3GO, ran a marathon CanWarn net keeping everyone informed of weather, power outages and the latest road conditions. Please see the Public Service / ARES column on page 48 for the complete report.

Districts reporting:
Eastern Ontario, Severn & Loyalist.

ECs (GCs) reporting:
VE3VY, VE3FFK, VE3YX, VA3ZAK, VE3IMP, VE3IEH, VA3MTT and VE3CLQ

DECs reporting: Lance, VA3LP.

OBS reporting: VE3YX, VE3KII, VE3VY, VE3ZJS and VE3IQZ

– 73, Michael Hickey, VE3IPC

ONTARIO GTA SECTION REPORT

SM: George Duffield, VE3WKJ
ASM: Vic Henderson, VE3FOX, James King, VE3ETZ
ASM: James King, VE3ETZ
SEC: Rick Harrison, VA3NV
SBM: Brad Rodriguez, VE3RHJ
STM: Vacant

NOVEMBER-DECEMBER SM REPORT:

There are several events that occurred during the month of December that are key to the continuing development of the GTA Section. The first, and the one that received national attention was the ice storm of December 21-22. Never in my memory has there been an ice storm such as this in the GTA. The good news is that the storm had little impact on the major infrastructure. Yes, there were power outages, some lasting more than a week. But there was nothing like the devastation of the power grid that was experienced in the great Ice Storm of '98. This was the good news. As will be read in

the following items, there was no declaration of an emergency anywhere in the GTA, therefore, no call for ARES assistance with communications. This does not mean that ARES was not active as you will also read later in this section.

Another piece of good news is that Malcolm Kendall, VE3BGD, has accepted an appointment as DEC for the city of Toronto. Section Emergency Coordinator Rick Harrison and I had been searching for the right person to fill this vacancy and we found him in Malcolm. We are looking to Malcolm to continue the development of ARES in Toronto, encouraging clubs to become involved in the Field Services and to provide guidance and education wherever possible to Toronto Amateurs. I applaud Malcolm for his interest and enthusiasm and for his willingness to accept this extremely important position in the GTA Section.

Just above Toronto is the Region of York, home to another active Amateur Radio group, the York Region ARC. From this group, I am pleased to announce that Russell Walter, VE3TRW, has been appointed EC. York Region ARC has been very active in the Field Services for many years and has developed many well qualified Amateurs who provided leadership to the club and its members. We congratulate Russell for stepping forward to assume the EC role and look forward to working with him in the coming months and years.

The final appointment concerns the Amateur station at the Provincial EOC in Toronto. Hal Buller, VE3XXX, has been appointed the Station Manager and will have the responsibility to operate the station whenever it is needed by EOC staff during an emergency or disaster situation. Hal has been working in the station since late December and has been active on many nets. We look forward to a greater involvement of the PEOC station, VE3EMO, in many activities in all Sections within the province.

SEC Rick Harrison, VA3NV report:

The December 22 ice storm seems to have been the major event for ARES teams in the GTA for the past month. It appears as if ARES teams in Halton Region were the only ones "officially" activated for this event. The Halton Region Emergency Communications Team (which directs operations for four ARES groups and two non-Amateur Radio groups in the Region) was placed on standby at 10 am. December 22. Although no actual deployment of radio operators took place, the group remained on

standby until being released by the Halton Region CEMC at 12:30 pm December 29.

ARES groups in Peel Region and the City of Toronto maintained contact with local government agencies and NGOs (Red Cross) throughout the event in case communications services were needed. Various nets were operational and radio operators were on standby throughout the storm. Fortunately, the regular communications infrastructure remained intact during the ice storm and ARES assistance was not required.

A debriefing meeting is being held at the end of January 2014 to see what we can learn from the events that transpired during this event.

Oakville ARES will once again be participating in Winter Field Day in January. This is an excellent test of setting up a communications station during bad weather. Whatever problems are encountered during the regular Field Day are worsened to a very large degree by cold, rain/sleet, snow, ice, winds etc. It really points out how simple things can be impacted by extreme weather. Hopefully, more GTA ARES groups will take part in this event in the future.

DEC (GTA West) Glenn Marrett, VE3CEZ report:

I filled in as OBS and net control four times during the month for the Halton Region Emergency Communication Team (HRECT).

I also met with the GTA Section Manager George Duffield, VE3WKJ, to have him sign off on 35+ certificates that were earned by a variety of participants during the October SET. Those certificates were well received during meetings with Brampton / Caledon ARES, Mississauga ARC / ARES, Oakville ARES and the Toronto ARES group.

During the week of December 20, we received a very serious coating of ice during a storm and due to the various locations with power outages the Region of Halton Social Services Department put HRECT (and thus the ARES groups) in Halton Region on "standby" status as the Region opened up "warming centres". In the end, we were not activated into service and the message to "stand-down" was issued on December 29 (by the Halton CEMC). This ice storm will provide a great local example for the various ARES groups to discuss, and formulate action plans around, during ARES meetings in the month of January.

2013 has come to an end and all the ARES groups in the GTA West are involved with their planning to support winter activities in the various areas.

One of the lessons that came out of the October SET was the use of FLDigi to pass traffic and this software will continue to receive examination and testing to further understand its potential use by ARES groups. A common piece of software is always desired, and there appears to be great potential for the use of this software, at least GTA-wide, as one of those common tools. ARES groups in the GTA West have received information literature as to where to download the software and how to start setting it up. Brampton ARES appears to have a good grasp on the mode and has had on-air demonstrations and learning sessions. Thank you to the Toronto ARES group and Malcolm, VE3BGD, for initially providing the spark and starting the "fire".

I would like to express my sincere thanks to all the volunteer radio operators who participated in ARES and provided radio communication support at the various events during 2013. I look forward to seeing a growth in participation through 2014, where all of us will have numerous opportunities to test our skills.

DEC Toronto Malcolm Kendall, VE3BGD report:

The Toronto ARES group was not activated during the ice storm. I was in touch with my contact for Disaster management at the Toronto Red Cross HQ and was kept apprised of the setup of the warming shelters. As all shelters had power and phones there was no need of emergency communications.

A number of the Toronto ARES members monitored repeaters and Simplex frequencies in Toronto.

Toronto ARES member Arpad, VA3VAD, ran a net on simplex 146.4600 for the first 48 hours after the storm a number of members and operators checked in.

Plans are moving forward to run an HF test with FLDIGI & NBEMS sometime in January (please see the Toronto ARES website for more details and updates in the Bulletins section).

I invite all GTA ARES members to try to check into the GTA Clubs, ARES and EMCOMM Regional net that takes place every Sunday at 5:30 pm on the VE3TWR repeater 444.400+ and 145.410- with a tone of (103.5). The net operators at this time are Joe, VE3OV and Malcolm, VE3BGD.

RAC FIELD ORGANIZATION REPORTS

National Traffic System (NTS) Net Reports

Net (Manager)	Sessions	QNI	QTC
November 2013:			
APSN (VA6IX)	30	1597	28
Alberta ARES	12	209	10
Alberta Aurora (VE6TRM)	30	2206	0
BCEN (VE7XLH)	30	290	33
BCYTN (VE7WJ)	30	560	109
CECA (VE7GN)	4	43	10
MEPN (VE4LB)	24	485	8
MMWXN (VA4GD)	30	597	4
MRS (VE4HK)	8	270	0
MSMN (VE4AEW)	21	522	0
December 2013:			
APSN (VA6IX)	31	1732	25
Alberta ARES	12	261	16
Alberta Aurora (VE6TRM)	31	2442	0
BCEN (VE7XLH)	31	234	29
BCYTN (VE7WJ)	31	449	71
CECA (VE7GN)	5	42	13
MEPN (VE4LB)	22	438	2
MMWXN (VA4GD)	31	599	1
MRS (VE4HK)	9	291	0
MSMN (VE4AEW)	22	628	0

Toronto ARES runs nets seven days a week. After the roll call all Amateur Radio operators are invited to check in. The full list of ARES and Club nets can be found in the Toronto ARES Bulletins section on the Toronto ARES website at <http://ares.meskes.ca>

City of Toronto ARES:

See Toronto DEC report above.

Brampton / Caledon ARES:

On December 4, Richard, VA3RMU, did a presentation on ARES to the new class of graduates of the Community Emergency Response Volunteers (CERV) run by the City of Brampton EMO, and at the end of the week to attend their graduation. The presentation was well received and six members of the group expressed interest in becoming Amateurs. We plan to set up a class for them early in the New Year. The Ice Storm of December 21-22 did quite a bit of damage in Brampton, and the EMO opened some shelters manned by CERV and Red Cross volunteers. ARES was not officially requested to help, however, we were on standby.

Burlington ARES:

The Burlington Santa Jingle 5K Run was held on Saturday, December 7. A reported 3,000 participants ran or walked in the event dressed in Santa suits. They started and finished at Burlington City Hall and ran a course in the downtown core. Thank you to Gary, VE3TTO, Norm, VE3ZKO, Stan, VA3SBB, Joan, VE3JNX, Peter, VA3PRE, Rick, VA3NV, Shawn, VA3MFD and Kevin, VA3KRA, who participated in the last event of 2013.

I would like to thank all of the volunteers who have come out and supported the community events in the Burlington, Oakville and Hamilton area in 2013. Without your support it would make the job much more difficult.

I look forward to the support of volunteers for 2014. It is already shaping up to be a busy season with seven events already on the books. If you are interested in coming out and helping with communications for an event or just interested in seeing what it is all about, please contact me.

I would also like to thank the local area Amateur Radio Clubs and individuals who sponsor repeaters for allowing us to use and test the coverage of the repeaters during our Community Events. Your generosity is greatly appreciated.

On Monday, December 9, EC Kevin, VA3KRA, attended the monthly meeting of the Halton Red Cross Disaster Management Team.

On Sunday, December 22 at 12:48 pm, Burlington ARES was placed on standby by Halton Region through HRECT. No call up activation call was received. Burlington received the official stand down from Halton Region on Sunday, December 29 at 12:31 pm. Kevin, VA3KRA, assumed an NCS information net from Derek, VE3DDL, on the 147.015 VE3OAK repeater while he took a dinner break.

Burlington ARES has participated in three of the Halton Region Emergency Communications Team (HRECT) nets for the month of December.

Georgetown/HARC ARES:

VE3PKG packet node has been out of service due to a fatal computer issue. The plan is to have a solid-state replacement in place before mid-January which will run from 12V backup power.

VHF (VE3OD) and UHF (VE3HR) repeaters are operational, both with 100% up time in December. The repeaters remained available for the full 72-hour interval while all commercial power to the repeater site was off during the ice storm.

Oakville/Milton ARES:

The last month of 2013 found Oakville ARES being put on standby as a result of the ice storm that struck the GTA. Derek, VE3DDL, manned the checkin net on Sunday, December 22 with a total of 15 stations responding to the net. Two of our members, Dave, VA3DDA and Peter, VA3PRE, both Red Cross volunteers, were called in to assist Red Cross over the course of the incident.

Many members reported minor damage to their properties, trees and antenna systems along with some power blackouts.

Mobile units reported fallen tree locations, traffic signals that were out, and road conditions in general. A debrief is planned for the January meeting. The following stations participated: VA3CQC, VA3EGG, VA3NV, VA3BL, VE3JUZ, VA3EXW, VA3DDA, VA3JDA, VE3CEZ, VE3OGP, VE3AJF, VA3PRS, VA3EC, VE3QSK and VE3IAN.

A new ARES-only newsletter is being designed for our members with an anticipated publishing date in early January.

Plans are now moving ahead for Winter Field Day with a site secured at Halton Region's main building parking lot.

DECs reporting:

VE3CEZ, VE3BGD

ECs reporting:

VA3RMU, VA3KRA, VE3OGP and VA3TMB.

AECs reporting: VA3RJS**OBS reporting:** VE3JUZ, VE3SHM

— George Duffield, VE3WKJ

NEWFOUNDLAND AND LABRADOR:

SM: Vacant

NOVEMBER-DECEMBER SM REPORT:

I hope everyone in the NL Section and across Canada for that matter, had a great Christmas and New Year. Maybe even Santa brought a few Amateur-related toys for you?

As I sit here writing this report, I'm in the process of recharging the backup batteries I had put in use during the power outages we experienced these past few days. A combination of cold weather, fire at a major hydro substation and a power plant not operating at full capacity left the NL grid without enough electricity to meet the demand. I was one of the more fortunate ones with limited loss of power, but I used my emergency supply to check on my capacity to operate. Everything worked well so I feel I am capable, should an emergency situation arise, of packing up a Grab-and-Go station in response to a request. I've talked to some of our friends at FES-NL who have been punching long hours during this emergency.

Joe Craig, VO1NA and the Marconi Radio Club of Newfoundland (MRCN) have been busy this past month with experimental transmission on a new proposed Amateur band. Thank you Joe for reporting the following:

"As you are aware, Industry Canada sought and published comments on adding 472-479 kHz as an Amateur band to the table of frequency allocations. These were overwhelmingly supportive and so MRCN thought it might be a good idea to focus attention on this proposed new band and the role of Amateur experimentation and emergency communication."

Last fall, the Mayor of Bauline dropped by for a visit and I gave him a quick overview of the LF/MF hardware. He was quite enthusiastic about this and our service and provided a telegram to be transmitted on the new band. It was hoped that we could give a demo using an antique HRO receiver so a frequency of 478 was chosen. There was interference on this frequency so we moved down to 477.7 kHz. The operation, using call sign VX9MRC, was in the memory of Wayne, VO1TA, who provided many useful signal reports for the recent 500 kHz experiment and Ken, VE3PU, who worked successfully on the international scene to get the band approved at WRC12.

Permission was received from Industry Canada to operate from December 14 to 15 with an ERP of 5 watts. The mayor's message was received by several stations including Carl, VO1UL, in St Anthony, who relayed it to his town council. This was the most distant station in the province to report the signals. There were none from Labrador, though "contacts" were had with American and Irish stations. These were not formal QSOs as there are no provisions for this at the moment.

We can all look forward to this new band and its exceptional reliability for emergency communications. Please consider experimenting on this band when it becomes available and don't hesitate to ask anyone in MRCN for help to you get started. Special thanks to Ev, VO1DK, of RAC and WW3ME of the ARRL for their excellent promotion of the event."

This past December 12 was the 112th anniversary of Marconi's reception of the first transatlantic signal on Signal Hill. A number of clubs and Amateurs made the trek to the hill to mark the anniversary. Due to the weather conditions and the fact that Parks Canada had to scale back operations at this time of year for budgetary reasons, stations operated mobile.

Society of Newfoundland Radio Amateurs (SONRA) members Dave, VO1LM, Ira, VO1IRA and Paul, VO1UF, operated VO1AA mobile as well as MRCN Amateur Joe, VO1NA, who operated VO1MRC mobile. Joe passed congratulatory messages to the Poldhu station, GB2GM, on the other side of the pond.

How Marconi was successful on that day back in 1901 is nothing short of a miracle to me. Signal Hill has to be one of the most inhospitable locations for radio in all of NL. At 500 feet or more above sea level, wide open to the North Atlantic, you, in December, need to wear your long-johns to battle the wind and the sideways rain/snow or whatever Mother Nature throws at you. On some days up there, if you used a kite as Marconi did, you and not your signal would be received on the other side of the Atlantic.

In December, Parks Canada and SONRA held the annual "Signals to Santa" event. Parks Canada puts a fair amount of resources into this rewarding exercise. The chat with Santa to pass on Christmas wish lists to the North Pole only takes five minutes or less for each kid, but the families stay around the Parks Annex to participate in the crafts and musical interludes put on for the kids, as well as the chance of winning a prize and enjoying some treats. Audrey and her staff are to be commended and so is Dave, VO1VCE, for the North Pole link. Participation is increasing as the message is getting out with both print and visual media in attendance.

During the month of December, SONRA sponsored the Salvation Army Kettle at the foot of the escalators in the Avalon Mall. Paul Burggraaf, Paul Fisher, Doug Mercer, Doug Matchim,

Loren Butler, Norma Stacey, Earl Tucker and I all volunteered an hour of our time and raised in excess of \$600 that day. In total, the Salvation Army surpassed their \$175,000 target to collect more than \$190,000. It is a great way to volunteer an hour as you most likely will see friends you haven't talked to since last year.

Well, after months of rebuilding, the central repeater system of VO1GLR and VO1LJR is up and running. VO1SHR is all repaired and ready to go back in position as well but Mother Nature is not cooperating; too much snow to get up to the site. Eventually we should have a reliable system from metro to central.

The nets continue with active participation. Each year the Cod Jigger Net has its Christmas contest, with the winner getting, what else, the Cod Jigger Trophy to keep for the year.

This contest has a history back to the commencement of the net and the trophy is adorned with the names of all the past winners. Three Net Controllers are randomly selected to operate for one day each on either Christmas Eve, Christmas Day or Boxing Day. For one hour, from 9:30 to 10:30 local, these three try to get the most checkins, winner takes all. This year Bill, VO1WB, CJ Chief Net Controller reported a tie occurred between Cal, VO1CAL, and Ira, VO1IRA, with over 30 participants each.

Thanks fellows and Dave, VO1VCE, for having a bit of fun with this. In keeping with the Nets, here are the following numbers:

November:

Cod Jigger 304

Evening 942

December:

Cod Jigger 514

Evening 724

My thanks to Ken Tucker, VO1KVT, Joe Craig, VO1NA and Ira Stacey, VO1IRA, for their contributions to this report. Remember, Amateur Radio is a hobby; have fun with it.

Charlie Marsh, VO1VZ



For the RAC Store visit:
http://www.cafepress.ca/rac_radio

COMING EVENTS

THE HAMFEST AND FLEAMARKET CALENDAR

The following events are listed by date. Some dates and details are tentative. For more Hamfests and Fleamarkets please go to <http://rac.eton.ca/events/upcoming.php>

CVRS ANTIQUE RADIO SWAPMEET

Sponsored by the Canadian Vintage Radio Society

Date: Sunday, March 16.

Time: 1 pm to 3 pm.

Place: Burnaby, British Columbia.

Charles Rummel Park corner of Lozells Avenue and Government Road.

Description: Antique Radio Swap Meet, Radios, Parts, Tubes, Books etc.

Cost: Free Admission, Free Sellers, Tables.

Webpage: <http://canadianvintageradio.com/contact/>

HAM-EX 2014

Sponsored by the Peel & Mississauga ARC

Date: Saturday, March 22.

Time: Vendors 7 am; Exhibit Hall 8 am;

Fleamarket 9 am.

Place: Brampton, Ontario; Brampton Fall Fairgrounds at Heart Lake Road and Old School Road.

Directions: Exit hwy 410 north from either hwy 407 or 401. Exit at Mayfield Rd and turn left on Mayfield Rd. Turn right onto Heart Lake Rd north and follow the signs.

Description: Lots of vendors and interesting exhibits and demonstrations. DXCC, WAS & VUCC card checking. Licensing Examinations. \$1000 Grand Prize voucher from Radioworld. Free parking.

Cost: Public \$7; Vendor tables, 8ft \$35, 6ft \$30 with one free admission per table, \$7 for each additional admission.

Talkin: VE3PRC 146.880- (no tone) VE3MIS 145.430- (103.5 Hz tone required).

Webpage: <http://www.ham-ex.ca>

18TH ANNUAL IROQUOIS FLEAMARKET

Sponsored by the Iroquois ARC

Date: Saturday, April 5.

Time: Vendors 8 am; Public at 9 am.

Place: Iroquois, Ontario; Iroquois Civic Building at 1 Dundas Street. Take exit 738 from the 401.

Cost: Admission is free! Table rental \$10.

Talkin: 145.29(-) VE3IRO.

Information: For table rental contact Mike at va3tufham@aol.com or Don at va3nc@rac.ca.

MARC HAMFEST

Sponsored by the Montreal ARC

Date: Saturday April 12.

Time: Dealers 8:15 am; Public 9 am.

Place: Montreal, Quebec; New location: St. Ignatius of Loyola Parish Church, 4455 West Broadway (STM bus 51)

Description: Door Prizes, Snack Bar.

Cost: Public \$5; Tables \$10 (2 for \$18). Table rental includes one admission.

Talkin: 147.060+ (VE2BG) .

Information: For general information and reservations contact Jim Hay at 514-990-1965 or at ve2ve@marc.ca.

Website: <http://www.marc.ca/fest/fest.html>

MARCHÉ AUX PUCES MARC

Commandité par le Montreal ARC

Date: samedi le 12 avril 2014

Heure: Vendeurs 8h15 et public 9h00.

Local: Église de la paroisse St. Ignatius of Loyola, 4455 West Broadway (autobus STM 51R).

Décription: Prix de Présence, Casse Croûte.

Frais: Public \$5; Tables \$10 (2 pour \$18). Un billet inclus avec table.

Renseignements: Pour renseignements générales et réservations contactez Jim Hay à 514-990-1965 ou ve2ve@marc.ca.

Site web:

<http://www.marc.ca/fest/fest.html>

WINNIPEG ARC SPRING FLEAMARKET

Sponsored by the Winnipeg ARC

Date: Sunday, April 13.

Time: Coffee, snacks, and eyeball QSOs

9:30 am; Vendor setup 9:45-10:30 am;

Buying begins: 10:30 am;

Prize Draws: 11:30 am.

Place: Winnipeg, Manitoba; at the Heritage Victoria Community Centre, 950 Sturgeon Road.

Description: Winnipeg's favourite gathering of new and old hams along with a Fleamarket.

Cost: \$5 per person. Exact change preferred. Tables: \$5 each for WARC members and \$10 for others.

Information: Contact Ruth, VE4XYL, 204-837-6915 or ve4se@mymts.net to book a table. For further information, contact Dick, VE4HK, at ve4hk@rac.ca or 204-256-3143.

Talkin: 147.390 + offset 127.3 tone.

38TH DURHAM REGION HAMFEST

Sponsored by the North Shore ARC and the South Pickering ARC

Date: Saturday, April 19.

Time: Vendors 7:30 am; Public 9 am to 1 pm. Some vendors leave before 1 pm so be sure to get there as early as you can!

Place: Pickering, Ontario; the Pickering Recreation Complex at 1867 Valley Farm Road situated along Highway 2 between Brock and Liverpool roads. Recently renovated with improved lighting and facilities. Plenty of free parking.

Cost: Public \$6; Tables \$25 in centre of room (incl. 1 person). Wall tables \$50 (incl. 1 person). Hydro may be available at some tables and *must* be requested on



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- Ladder Line (300, 400, 440, & 450 Ohm)
- Antenna Wire (bare, tinned, & insulated)
- Baluns 1:1, 4:1, 6:1 (stainless hardware)
- RF Coaxial Chokes (160m thru 6m)
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email: info@mapleleafcom.com

the Table Registration form (an extra charge will apply for Hydro). New This Year: Extra charges will also apply for late registration. Table Registrations must be postmarked by April 4. Any Registrations received with a later postmark date will be considered as late registration and an additional \$10 will apply.

Talkin: VE3SPA 147.375 (+), no tone.

Information: Durham Region Amateur Radio Hamfest, PO Box 53, Pickering, Ontario, L1V 2R2. For Tables download the Registration Brochure from the website and mail to the PO Box listed. If you have Registration questions, you can email Gord Wilkins, Registration Coordinator D-Hamfest@rogers.com.

For Non-Registration questions:

Contact Walter Cang, Hamfest Chairman, canadianamateur@gmail.com.

Webpage: New website can be found at <http://www.durhamregionhamfest.com>

NEW ENGLAND AMATEUR RADIO FESTIVAL (NEAR-Fest XV)

Sponsored by the New England Amateur Radio Festival, Inc.

Date: Friday, May 2 to Saturday, May 3.

Time: Gates open at 9 am on Friday for sellers and buyers. We do not provide for early admission and preferential treatment

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for "dealer setup" or "Early Bird" buyers. Everyone has the same chance to find the bargains!

Place: Deerfield, NH, USA. The Deerfield Fairground is located on Route 43 approx 15 miles NE of Manchester NH. GPS coordinates: N42d 5m 57.4" W71d 14m 33.5s (Lat 43.099286 Lon -71.242663).
Cost: \$10 per person and \$10 per vehicle into the fleamarket. Camping fees are \$30 a night. Tent sites are \$15. All overnight fees are payable to the Deerfield Fair Association.

Talkin: K1JEK/RPT 146.700 MHz (-600 PL 88.5) 146.52 direct 3.885 MHz Tune your car radio to FM 95.1 or AM 650 for continuous hamfest news and entertainment.

Information: W1RC@near-fest.com

Webpage: <http://www.near-fest.com/>

MAPLE RIDGE SWAP MEET

Sponsored by the Maple Ridge ARC

Date: Sunday, May 4.

Time: Vendors 7:30 am; Public 9 am.

Open For pancake breakfast at 8 am.

Place: Pitt Meadows, British Columbia; 12460 Harris Road, one Block South of the Lougheed Highway in the old REC Building.

Description: Come one come all!

Ham Radio & Computer Swapmeet

The largest in the Fraser Valley

Great prices lots of stuff. Pancake

breakfast between 8 and 9 am.

Concession will remain open during the event.

Cost: Tables \$20 includes 1 entry and a chance to win a radio. Entry \$5 includes chance to win a radio.

Talkin: 146.800 -600 + Tone 156.7.

Information: Call Nick at 604-465-9476

Contact: ve7te@mrarc.net.

Webpage: <http://www.mrarc.net>

30TH SMITHS FALLS FLEAMARKET

Sponsored by the Rideau Lakes ARC

Date: Saturday, May 10.

Time: Vendors 7 am; Public 9 am.

Place: Smiths Falls, Ontario; Smiths Falls Curling and Squash Club (same location as last year), Old Sly's Road. Check our website for a site map.

Description: Our 30th Annual Fleamarket of Amateur Radio Equipment includes a large number of Commercial and Private Vendors, a Canteen, a Consignment Table and an Equipment Test Table.

Cost: Admission \$5 (includes a door prize ticket); Youth under 16 admitted Free of Charge; Vendors: Tables (Approx. 2 1/2 X 5 ft) \$10 (admission not included).

Talkin: VE3RLR on 147.21 MHz+.

Information: For more information or reservations, contact ve3rlr@yahoo.ca or visit our website.

Webpage: <http://ve3rlr.dyndns.org>

51ST INTERNATIONAL HAM FEST

Date: July 11 and 12.

Place: The US Lodge in the International Peace Garden. South of Brandon on the Canadian USA border.

Description: Fleamarket, Rabbit Hunts, Mobile Judging, Homebrew Contest, Prizes, Food Concession, Saturday night Dance, Free Saturday Lunch for those registered. Campers, identify yourself at the gate for special camping rates.

Cost: Registration fee is \$15 per person.

Information: Contact: Richard Holder, VE4QK, ve4ihf@mts.net or 204-268-1702. See the article on page 23 for additional information.

Webpage: www.mts.net/~holder/ihf.htm

40TH ONTARIO HAMFEST

Sponsored by the Burlington ARC

Date: Saturday, July 12.

Time: Inside & Commercial Vendors 7 am and Tailgate Vendors 8 am at the Robert Street Gate; Public 9 am at the Thomas Street Gate only.

Place: Milton, Ontario; at the Milton Agricultural Fairgrounds.

Cost: Public \$ 7; Tables: \$14 each

Tailgate Permit \$ 7 per space.

Talkin: 146.520 Simplex.

Information: Coordinators Bob Parker,

VE3OIP, barc.ontariohamfest@gmail.com

Vendor Coordinator: Norm Freidin, VE3CZ1

ontariohamfestvendors@gmail.com

Mail Vendor reservations to:

Ontario Hamfest Vendor Registration

2129 Larabee Court

Burlington, ON L7P 3S3

Phone: 905-335-8962

Webpage: <http://www.barc.ca/Ontario%20Hamfest.htm>

REFLECTED SIGNALS: TCA 1978

TCA began a series of articles on Willi de Roos, VK9XR, as he started sailing through the northwest passage, then eventually around Cape Horn in an attempt to circumnavigate North and South America.

There was a series looking back at people's experience getting their first licence, and another one about sources for parts, especially used ones.

There was an article outlining how much was known (and unknown) about the biological effects of radio, entitled "Cooked Ham".

Also this year was "Antennas for Apartments", "The Renters Radiator" and "Advice for the Cliff Dweller", the leading edge of an emerging trend to more difficult antenna situations.

Another trend was started with the first of many articles on Packet Radio, along with discussions of other digital modes, and word of the first Digital Operators Certificate. There was an announcement of a "New 2 way TV system" called VIDEOTEX.

There was a review of the TRS-80 Microcomputer, in which the author said "Microcomputers are like potato chips. Once you start you won't stop". How right he was.

1978 was the year the Canadian Forces Affiliate Radio System (CFARS) began, and Cosmos 954 ended, spreading radioactive debris over a big swath of the territories.

There were articles about customs tariffs, frost effects in towers, and what wire goes where in the new(ish) three-wire plugs.

As more hams went mobile and more electronics appeared under the hood, there was an article about the interaction between rigs and the fuel injection and cruise control systems in the new hamshack on wheels.

73, Mike Kelly, VE3FFK



RADIO AMATEURS OF CANADA - MAPLE LEAF LEGACY CIRCLE

RADIO AMATEURS OF CANADA - CERCLE DES LÉGATEURS MAPLE LEAF

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RAC would like to recognize and honour Amateur Radio operators who have made the ultimate gift by voluntarily including Radio Amateurs of Canada in their will or other estate plans by welcoming them into the RAC Maple Leaf Legacy Circle.

One of the most important matters that everyone must manage and establish at some point in life is proper financial due diligence in estate planning for your family and loved ones. One may also choose to express their gratitude to those organizations that meant the most to you in your life. Professional advice should be sought in estate planning and your legal rights and tax laws must be considered when planning which estate vehicle best meets your needs. Your goals and priorities can then be consolidated into a customized plan.

RAC is well aware of many testimonials whereby Amateur Radio played a very important role in many people's lives as a fulfilling hobby and for some it even became a stepping stone to their financial success in professional life. Choosing to enroll in this RAC program is a very thoughtful and generous action we wish to recognize.

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- Custom-designed RAC Maple Legacy Circle pin with engraved call sign
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Contact RAC for further information: 1-877-273-8304

The Radio Amateurs of Canada Inc., is a not-for-profit organization holding the following registration information:

Corporation Number 2858592

Business Number (BN) 899715189RC0001

Governing Legislation Canada Corporations Act



RAC aimerait rendre hommage aux radioamateurs qui ont décidé de faire de Radio Amateurs of/du Canada un de leurs légataires légaux par l'expression testamentaire de leur volonté ou autrement, et ce en leur souhaitant la bienvenue dans le Cercle des légateurs Maple Leaf de RAC.

Une des choses les plus importantes que chaque personne a à décider et gérer à un moment donné de sa vie est la juste valeur des biens et immeubles qu'il souhaite léguer à sa famille et à ceux qu'il aime. Vous pouvez aussi choisir d'exprimer votre gratitude

envers des organisations qui signifient beaucoup pour vous. On doit alors rechercher un avis professionnel en matière de biens et immeubles. Vos droits légaux, taxes et lois doivent être prises en considération au moment de planifier ce qui vous convient le mieux. Vos buts et priorités doivent être conciliés dans un plan qui respecte vos intentions.

RAC est bien conscient des multiples facteurs qui démontrent le rôle très important que le radioamateurisme joue dans la vie de beaucoup de personnes à titre de hobby principal et, pour plusieurs, jusqu'à devenir une rampe de lancement pour leur succès financier et leur vie professionnelle. Choisir d'adhérer au programme de RAC est donc une difficile mais généreuse décision. Nous le reconnaissons.

Les bénéfices du Cercle des légateurs Maple Leaf de RAC

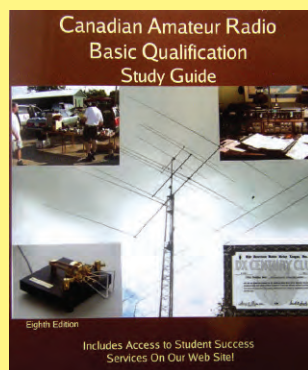
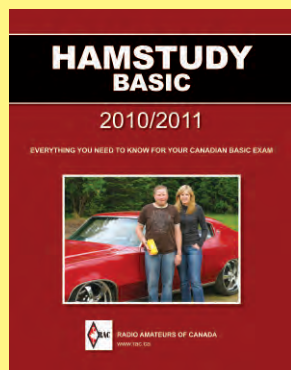
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Communiquez avec RAC pour plus d'informations :
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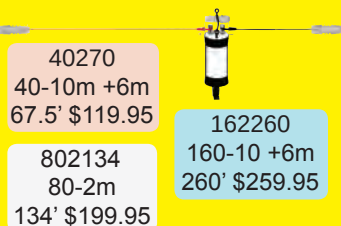
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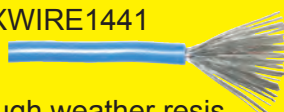
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